MASSACHUSETTS PLOUGHMAN

DEVOTED TO AGRICULTURE, HORTICULTURE, THE FARM, THE GARDEN, THE FIRESIDE, MORAL LIFE, LITERATURE, USEFUL NEWS, &c.

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Agricultural.

Wheat Growing.

While we do not think that wheat is now or is likely soon to be one of the most profitable crops in New England, or at least in such sections as are near our cities and manufacturing towns or are conveniently connected with them by railroads, yet we think there are parts where it can well be grown and at a reasonable profit, if there is a good sale or a good use for the straw upon the farm. It was not abandoned in Massachusetts because our soil had grown too poor for it, nor yet because of the expense of growing, but because the fertile fields of the Western States had taken to cultivating it in large tracts by modern machinery, and the railroads would bring us flour and the bran so cheaply, both for first cost of grain and for the transportation, that our farmers preferred the other crops of orchards, fields and garden to the crops of wheat.

Then, too, they had begun to devote their best lands, their manures or fertilizers to such crops as would yield larger returns to the acre, and had not learned to what an extent the average crop could be increased by the adoption of better methods. They had often tried to be contented with a yield of twelve to fifteen bushels of grain to the acre, though there were those who succeeded in growing twenty to thirty bushels. Even these last, called lucky by their less fortunate neighbors, were scarcely satisfied with the results when the grain sold at the dollar mark per bushel or below, while small fruit growers and market growers, specialists who had given much time and used large amounts of fertilizing material on some one crop, were boasting at the agricultural meetings or in the papers of crops that were valued at $300 to $400 per acre, and in some cases, perhaps, double those amounts. Those who made these boasts seldom told the cost of growing them, and never of the years when their favorite crops failed or the price went suddenly down.

But there is no need of being unable to grow more than thirty bushels of wheat to the acre, though the average for the United States is now, we think, below twenty bushels, and it is less in some of the very fertile States of the West than among the hills of New England. We have seen a field in New York that grew over fifty bushels per acre, while there are authenticated records of seventy-six and of eighty-two bushels per acre in England, and Scotland averaged over fifty bushels per acre more than a half century ago.

Why this difference? We believe that it is not the result entirely of soil and climate, but of the application of more careful, and, we might say, more scientific methods to the preparing the soil and selecting the seed. The selection of the soil has much to do with success in this as in other crops. It does not need a rich vegetable mould that has but little phosphate of lime and potash, as it needs the potash to keep the straw from falling and the phosphate to make a full, well-grown head of plump grain. Neither is a sandy soil much better, because it lacks in nitrogen and, perhaps, also, other elements of fertility. A clay soil may not lack in potash, but it may not have had the other elements, or they may have been exhausted by previous cropping. A strong clay loam is usually good wheat land.

But one knowing the capabilities and needs of his soil can supply the lacking elements in his fertilizer or manure. He can add muck or manure to his light soils, and potash if they need it, or lime and potash to his stronger heavy soils, and in either case he may add phosphoric acid as liberally as his means will allow. He can plow under clover or leguminous crops to gather nitrogen more cheaply than he can buy it of the fertilizer dealers, and he can so rotate his crops as not to exhaust the soil.

Adding fertilizers to the soil is not the only method of increasing the yield. Jethro Tull said many years ago that "tillage is manure." Farmers here may not feel inclined to cultivate among the wheat crop after it is up or in the spring, though there are places where it has been hoed where the seed was drilled in, with an increase of crop that seemed to pay for the labor. But they can work their land before sowing the seed. To plow the land early, and perhaps cross-plow or use the disc harrow until there is a good seedbed of finely pulverized soil four inches deep, in which the weed seeds have been germinated, and the young weeds killed by three or four harrowings at intervals of a week before the seed is put in, would greatly increase the wheat crop as it would many other crops, and we think a rolling in the spring to press down the roots of such as may have been thrown out by the frost would often be beneficial, as would a harrowing with a light smoothing harrow if a heavy rain causes the soil to bake down.

We are not such a stickler for deep plowing as many, even if the wheat roots do go down five or six feet. Plow from five to nine inches, as it may be possible without turning up much of a cold, clay subsoil. If the roots get a vigorous growth in the surface soil, they will go deeper if they need moisture.

The selection of the seed is of no small importance. There are now many new varieties that have obtained a reputation for producing larger crops than those in general use, but they do not seem to do equally well on all soils or in all localities. What has yielded the largest crop in one section of Canada proved inferior in another, when several of those thought best were tried in all the counties. It is even more probable that in New York or Ohio some other might prove better. Get that which has proven best in your own section, and then experiment with some of the others that have proved good in other sections. Get good, sound and plump seed, and it will throw up stronger and more vigorous plants than shrunken seed or that which is damaged. Large seed grains are reported to give better results than small ones. If one could select before harvesting the best filled heads from the most vigorous stalks, as some farmers select their seed corn, it would be likely to increase the crop. This might not be easy to practice where one needed the seed for a thousand acres, but if enough was selected for one acre, and the product of that acre used for seed the next year, it should result in an improvement, while if this was followed a few years one would have an improved variety. If one got fifty bushels per acre, he should have enough to sow from twenty-five to forty acres, for many contend that with selected seed drilled in five pecks to the acre is enough.

Prepare the seed by treating it with formalin or by some other method to destroy all smut spores, and if necessary by putting it in a strong solution of salt and water to float off all chess, cockle and light weed seeds or light grain. There may be little improvement seen in one year or in two by these methods. It was found in trying to change the character of the corn plant by selection that, though improvement was made in the first year and the second, it required from four to six years to so fix the type that more than one-half the crop became true to the type desired. It is probable that the better the soil and fertilizer is adapted to the crop and the better the cultivation given, the greater will be the improvement each year. Baron Von Liebig, in his agricultural chemistry, speaks of the value of the ashes of burned wheat straw upon a future wheat crop, and that was formerly a custom in England, as was also the burning of the stubble, but we are inclined to think the plowing under of the stubble and a more liberal use of the straw as bedding and an absorbent in the stables and yards would be more profitable in this country, even though it did not always go to the wheat fields.

If one grows wheat for home use the standard should be that which is called a good milling wheat, with small proportion of bran, with a white flour which is rich in starch and gluten. Certain experiments indicate that the amount of protein in the grains can be increased by the careful cultivation and fertilizing of the plants. The wheat should be such as is hardy in this climate, strong in the straw, and not easy to shell out and waste, though in this and other respects it will be found that cutting before fully ripe will save more of the crop and improve its quality more than allowing it to stand until fully ripe, while if the straw is wanted for feeding it is also much better. While winter wheat is the favorite in the Eastern States, spring wheat may be sown on soils where winter wheat is thrown out by the frost.

Dairy Notes.

The writer of one of the prize essays read before the Ohio State University claimed that the Red Polled cattle were so popular in some parts of the West as to be very numerous in the States of Illinois, Wisconsin, Michigan, Ohio, Kansas and Texas. They are among the oldest breeds in England, though long divided into the Norfolk Polled and the Suffolk Dun. These were so much alike that as long ago as 1846 they were classed as one breed, and called the Red Polled, and a herd book was established not long after in which all that gave evidence of being descended from either of these breeds could be registered. Their most prominent characteristics, as seen at first glance, are the absence of horns and of white in the hair. They may have some brindle marks among the dark red, and in some cases they have a little yellow, but not often. But a closer examination shows a well-rounded form, broad at the hips and shoulders, a rather heavy neck and large girth back of the shoulders, with ribs well back to the hips. The udder is not as prominent as that shown by some other breeds, and they do not produce as much milk as the Holstein or the Ayrshire when first fresh, but they have the faculty of holding out in the amount they give well up to the period of dropping the next calf, and their milk is second only to the Jersey and Guernsey in amount of butter fat, or so say those who have kept the pure breeds. They are also claimed to be among the most hardy of the English breeds.

EMILY, 15-16 JERSEY.
Loaned by R. I. Agricultural Experiment Station, Kingston, R. I.

We never owned a pure bred that we knew to be such, but we once owned an old cow that answered the above description very well, but we knew nothing of her breeding. She was what we call a good feeder, not requiring as much food as some others, but always eating what was placed before her, not being at all dainty. Never off her feed or sick during the years we owned her. Yet she might have been only a cross-bred animal, for the males of that breed are noted for eliminating the horns and giving their color and form to the calves they get. As they take on fat readily when not giving milk, and are of very good size, they should come nearer suiting those who want the dual or threefold-purpose cow for milk, butter, and at last for beef. An English writer two centuries ago declared the butter produced from the Suffolk to be "the pleasantest and best in England." Those who keep the Red Polled now claim high quality and weight of beef in proportion to the food consumed as one of the merits of the breed.

The Vermont Experiment Station has been for four years testing the value of apple pomace as ensilage. They found a ration of hay, with ensilage, one-third corn ensilage and two-thirds apple pomace ensilage by weight, with from four to eight pounds of grain per day, varying amount according to size and weight of animal, gave satisfactory results, and they have fed as high as fifteen pounds a day of apple pomace without any bad results. Cows continuously and heartily fed have not shrunk, but have held their milk flows remarkably well. Neither the milk nor butter were inferior in any way when the pomace was fed. Yet they suggest caution and watchfulness at the beginning of using it, as some have reported severe shrinkage at the beginning of using it. (This may have been because the pomace was so sour as to make the mouth sore or the gums, or from too liberal a feeding of it.—ED.) No especial care is needed in putting it into the silo. Level it from time to time, and it may be left uncovered and unweighted. If an article which has heretofore been a nuisance can be made a good feed for milch cows, no more should be wasted.

Probably the worst feature in a dairy barn is a wooden floor through which the liquid manure can soak, to remain below it and decompose, tainting and practically poisoning the air above it, beside wasting the most valuable of the fertilizing elements in the excrements, for both scientific and practical men are agreed that the liquid manure from the cow has more value than the solids. But little better is the cellar under the cow stables, although they may save the liquids to a greater extent if there is sufficient absorbent used in them. But the air in the stables has the odor of the decomposing manure below, and neither can the cows be healthy nor the milk be free from the odor of the manure heap, or the bacteria that is the cause of a rapid change in flavor of the butter after it has been made a few weeks. It is true that good butter used to be made from cows kept in barns so built, but in those days the barns were not tight, but well ventilated, too well we used to think, and the cows gave but little milk in the winter, and the milk did not remain long in the barn. And the winter-made butter was never called first-class, even when made by those who could and did make choice butter while the cows were milked out of doors.

We like a cement floor for all animals that will save all the liquid manure and carry it to a shed outside, in which the solids should be put every day or oftener in the winter, and which could be so arranged that the odors from it should not go back into the stable. This floor could be brushed clean every day, or even washed down when it was thought desirable, and the air in it kept as pure as the air out of doors.

And while we want a warm stable, we would have plenty of light. No animal can live long and be productive if confined in a place where the sunlight does not enter freely, and those who have provided their stables with windows often allow them to be so obscured by dirt and cobwebs that they are but semi-opaque, giving less light than ground glass. With pure air and sunshine there is but little chance for tuberculosis, while without them the stable becomes a breeding place for this as well as other diseases, and for the germs of all that makes the milk and butter just what it should not be.

Forestry on the Farm.

That all things in nature are related to each other and interdependent is a fact doubted by no one, yet often neglected in practical life by us all. The farmer's business, more than almost any other, depends on the true estimate of this fact for its ultimate and greatest success. So forestry has an important part in up-to-date farm practice.

It is being pushed to the front by many enthusiasts at the present time, who would in the hour of excitement lead sentimental people to see nothing left of our extensive area of forest growth but barren hills, denuded mountains, protruding ledges and valleys in disgrace.

Now, with all due respect and hearty support for the abstract aim of this movement, which is rightfully the replenishing of growth, where once cut over with a profitable succession, we hope they will not so stretch the thread of truth that when tested by common-sense, practical men it will break and cause a collapse of the whole scheme, leaving the operation of the project in the hands of erratic and overzealous theorists to the detriment of the object.

Nevertheless, we are aware that you cannot get a tool sharpened on a grindstone without having a crank attached. We hope, however, this crank will not encircle the world with his comet-like sweep, to the extent farmers will believe the day of judgment at hand, and forsake their proper calling and legitimate practice, because forests are becoming beautifully less in some sections.

Certain theorists have periodically announced the discovery that the extensive cutting of growth had so influenced the dispensation of rain, that we had nothing in the future to anticipate but parched fields and drought-stricken crops, but as often as the Almighty has given the wheel another turn and provided us such copious supplies of water, these weather wise have withdrawn to seclusion and another troop of kickers appeared.

The purpose of this paper is, if possible, to encourage would-be sensible students of this important question to anchor to well-established moorings, regardless of the ebb and flow.

There is no doubt forests exert an important influence upon soil moisture, but because you possess a farm adjacent to large forest area, do not suppose it will be Ben Franklin's kite to bring down the storm elements at will.

The most effectual influence will be in sustaining and conserving soil moisture. The melting snows and copious rains of spring supply a reserve of water if there is a receptacle for it. The forest trees, with their vast network of roots and rootlets, provide an ideal reservoir for this holding capacity. It is then dispensed by evaporation and by diffusion through the soil, being scattered in vapors, which lay close to the fields in the early morning, both in dews and low-lying fogs, or filtered through nature's irrigation arteries and capillaries direct to the roots of our plants. Did you never notice that the greater amount of moisture a growth is evaporating, the larger the supply of surface moisture in the soil at same time?

Hence if increased water supply with seasonable distribution on your farm is your wish, encourage forest growth on the higher lands which will favor your fields by gravitation. If you have never thought of this a little observation in your own town will prove it is fact rather than theory. A barren hilltop is losing its nitrates by every wind that blows, while one covered with tree growth is not only conserving these valuable elements, but dispensing them to the lands below.

By all means keep the springs which furnish your farm and buildings with water protected by some kind of growth on the higher lands.

This same practice will also insure you against unsightly and expensive water courses down your hillsides, acting as a safety valve in time of heavy rains.

This forest properly distributed will also temper the cold in winter and the heat in summer. Often the destruction of delicate fruits would be avoided, and their latitude limit removed materially northward, if a proper distribution of forest was made, for the sudden changes in temperature, enhanced by large range winds, usually do the damage. While the air, once warmed by the sun and undisturbed, will hold the mercury several degrees higher, when close to the frost line through the night, than where raked and disturbed by a wind from colder quarters, while blowing through the shadows in summer will add to the comfort of man, beast and crop.

These are some of the auxiliary advantages of the properly located forest to the farmer, but there is also the direct and practical side of the question.

First, before devoting land which is now cultivated as valuable for either hay or grazing to the planting of forest trees, take a look over your farm or lands, and see what nature has already done for you. Where she has planted a thrifty growth of pine, spruce, poplar, oak, tamarack or other indigenous variety it will likely thrive, while if you should make the assignment you might not be so fortunate, to say nothing of the time she has already gained in the venture, and the risk she has insured you from in the loss of young seedlings.

In a lot of spontaneous growth it will often surprise one to see how quickly a hundred trees can be counted. These lots are frequently nearly all of one kind, and if so, all stray trees not maturing in similar length of time had better be cut out while young.

Where two species of nearly equal number exist, the most desirable for market and early maturity should be saved, the other cut entirely out, unless there is plenty of room for all to follow individual and profitable habit of growth, and there is little difference in value.

Time spent in trimming and thinning these young growths will pay a man $5 per day. All deformed or sickly specimens of the kind decided upon to save should be promptly cut out, and those left carefully and thoroughly pruned.

All the lower branches from trees should be removed with a smooth cut close to the outer bark, but not cutting the bark of the body of the tree by any means. The severed base of the branch will then promptly grow over without a blemish, and the "knot" thus left in the wood will be absorbed and entirely disappear, whereas, if left till the tree has attained considerable size, the limb has a tendency to retain its individual form in the full grown and dressed lumber.

A good rule for trimming trees is to remove at each time they are pruned all the branches one-half the height of the tree from the ground up. And in thinning out a growth leave the trees selected to stand, as nearly an average as possible, the same number of feet apart as the trees are inches in diameter one foot from the ground.

These rules will well apply all the way from seedlings up to heavy forests. In planting trees for a windbreak, it is considered safe to reckon one rod of extent of shelter, on the lee side, for each foot of height the growth has attained. Of course, an abrupt slope will add to or discount, as the case may be, the rule being for level ground.

Having aided nature in her nursery thus, she will produce wood and timber for you fully twice as fast as alone. But, in thinning, always keep growing the most perfect and thrifty trees, notwithstanding the frequent advice to cut the largest, for if the smaller growth will pay you six per cent. dividends, the larger will surely pay twelve per cent., and when you have your crop ready for market, you will have a product you can command the market on, instead of having what everybody else has for sale.

When the practical farmer has completed well this task, he may consider the planting of new areas if he deems it wise, and then the kind of trees and location will be matters for consideration.

The number of trees for the common farmer to plant may wisely be counted on one hand, while the specialist may use several more in New England. From observation we would name them in what appeals to us as their profitable order, changing slightly for extreme north or south.

First, pine (white), which is so well adapted to so many of our waste lands of easy approach, and with its rapid growth bringing it to early merchantile size, so that the thinning may be turned to cash.

Second, silver poplar or American Aspen is in excellent demand for market, and grows quickly, is very free from surplus branches, and reaches such a height that it seems to pile up cords, while some others will grow halves. It will make good market product in twenty to thirty years. Cuts easily, and is light to haul, being marketed when peeled and dry.

Third, oak (red or white), though slower of growth and longer lived, its unique position having great value with few competitors, and its ability to thrive in hard places and flourish where less hardy trees would succumb to the elements, makes it the *ne plus ultra* for exposed locations.

Spruce (white or red), though hardy and of slow growth, probably about one-fourth of our available lands would be specially adapted to its cultivation, considering the place it holds in the demand for lumber and paper.

Maple (rock or sugar) is very desirable for the combined uses of shade protection, wood, lumber and sugar or syrup, making a plantation on a favorable hillside a yearly pleasure and profit to the owner, and enhancing the permanent worth of the farm materially, in case a sale is for any reason contemplated.

Then, and perhaps often first, we would suggest the planting of a small plot to locust, which grows like a weed, grows very tall, straight-bodied and vies with red juniper (cedar) in its lasting qualities as fence posts and for other uses of like nature. A small plantation will prove a bonanza to any farmer and a surprise-party every time he goes for posts, stakes, etc.

Then if a brook runs through favorable land, and a little side income is wanted that will yield its fruit every season, try a strip of osiers or willows, and it will give the boys a chance for a little pocket money, for they will be ready for market while the boys are yet boys.

Of course, several other kinds are desirable, and will be planted by those who make forestry a business, but we have named those which when placed in congenial surroundings will be most likely to thrive under the common farmer's care.

A. J. HAMM.

Leighton's Corners, N. H.

Secretary Wilson of the Department of Agriculture reports that of two lots of pears sent to England, one being wrapped with oiled paper around each pear, and the other unwrapped, the returns were sixty per cent. better for the wrapped ones. Perhaps this may have been in part due to the fact that they were a novelty, or perhaps to an idea that such pains would not have been taken unless the fruit was of extra quality. But if none are wrapped in this way but the best fruits, it may be possible to keep up the higher prices on it until some one attempts to pass off an inferior lot by the wrapping. It costs but little for paper and wrappings for a box, and to add sixty per cent. to the selling price means much better returns to the shipper.

The Hay Trade.

Election Day has deprived us of our usual full report of the hay trade, but there are not many changes in condition from last week. In Boston good hay is firm, very little prime being received, and selling readily from the car at $18.50 to $19 per ton, and even higher in small lots. No. 1 has a good demand at $17 to $17.50, and a good No. 2 brings $16, though rates run from that down to $14, as it looks to buyer and dealer. The lower grades are unchanged in price, but they are dull and hard to sell, excepting when one takes them because he cannot find the better quality. Straw is quiet, and while prime now is nominally $12.50 to $14, choice lots would sell above those figures if they were offered.

In New York the best grades are in moderate supply and steady, at $20 for prime and No. 1 at $18 to $19, No. 2 at $16 to $17.50. The lower grades are plenty and easy, at $12 to $14 for No. 3, $13 to $15 for clover mixed and $10 to $13 for clover, with stock accumulating.

The Interstate Commerce Commission has decided that, in the case of the National Hay Association against the Lake Shore and Michigan Southern Railway Companies and other railways, the carriers acted unlawfully in advancing hay and straw from sixth to fifth-class rates on Jan. 1, 1900.

The conclusion of the commission is as follows: "After giving full and careful consideration to all of the facts and circumstances and the arguments of counsel in this case, we are of the opinion that the defendants are mistaken in having believed that hay and straw were improperly classified and carried by them as sixth-class freight, and that their action on Jan. 1, 1900, whereby those commodities were raised to fifth class, and thereby charged fifth-class rates, was unreasonable and unjust, and resulted in an unlawful discrimination and prejudice against hay and straw localities in official classification territory wherein those commodities are produced, and against producers, shippers, dealers and consumers of such articles in that section of the country."

This will be good news to Eastern dealers in hay, and through them to their customers, as the difference in rates made a decided advance in prices at the Eastern markets, and dealers were obliged to pay it and take their chances of receiving it from their customers.

Butter Market.

There is little or no change in the butter market. The demand has been light, and receivers have not been able to clean up, although receipts have fallen off. There have been large withdrawals from cold storage and small dealers are taking them instead of fresh arrivals. New York holds prices one-half to one cent above Boston, and Western markets are strong, with an apparently good trade. Election day made Tuesday's trade very light. While the best grades of creamery are nominally 24 to 24½ cents, few large lots sold above 24 cents. Best marks of Eastern are held at 23 cents and fair to good at 20 to 22 cents. Firsts were 22 to 23 cents for Northern and Western and seconds at 20 to 21 cents. Extra-held creamery brought 23½ to 24 cents and firsts 22 to 23 cents. Boxes and prints were steady, with fair demand at 24½ to 25 cents for extra Northern creamery, 22 to 23 cents for extra dairy and 19 to 21 cents for fair to good. Dairy in tubs is 22 cents for Vermont extra and 21 cents for New York extra. Firsts 19 to 20 cents and seconds 14 to 16 cents. Imitation creamery in only moderate demand at 19 cents for extra and 18 cents for firsts. Ladles dull at 17½ to 18 cents. Renovated selling at 21 cents for extra and 18 to 19 cents for fair to good.

The receipts of butter at Boston for the week ending Nov. 1 were 13,063 tubs and 22,801 boxes, a total weight of 691,225 pounds, against 709,063 pounds for the previous week and 904,008 pounds the corresponding week last year. This shows a further falling off from the week previous and last year. Included in the week's receipts were 6664 pounds in transit for export. In last year's receipts were 84,170 pounds for export.

The exports from Boston last week were 3334 pounds. For the corresponding week last year the exports were 93,031 pounds. From New York no exports were reported last week. The exports from Montreal for the week were 7606 packages, against 5813 packages corresponding week last year.

The Quincy Market Cold Storage Company reported a stock of 203,092 tubs, against 162,457 tubs same time last year, having taken in 2507 tubs and put out 7917 tubs. The Eastern Company reported a stock of 44,890 tubs, against 23,451 tubs last year. With these holdings added, the total stock is 247,982 tubs, against 185,908 tubs, an increase for this year of 62,074 tubs. The net reduction in stock last week was 5833 tubs, against 5218 tubs same time last year.

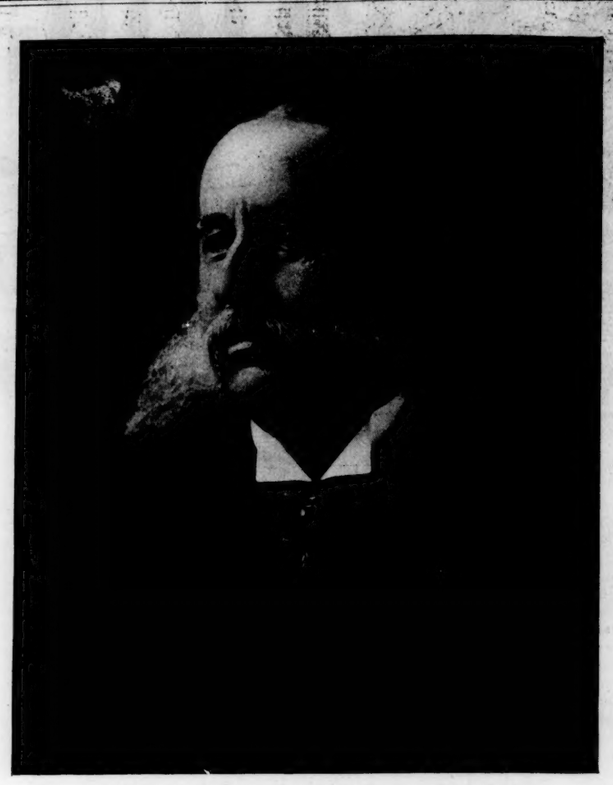
The summary of October trade shows 10,777,480 pounds on hand Sept. 29, and receipts during the month of 3,983,129 pounds, a total of 14,760,609 pounds; 4954 pounds were exported, and 9,919,280 pounds on hand Nov. 1, showing a consumption of 4,836,375 pounds during the month, against 5,361,506 pounds in September. In 1901, there were on hand 8,407,200 pounds at the beginning of the month, and 4,742,156 pounds were received, making the total supply 13,149,356 pounds; 303,515 pounds were exported, and there were on hand Nov. 1, 7,436,320 pounds, showing a consumption of 5,409,521 pounds in the month, against 4,402,194 pounds in September. These figures do not show how much the private storerooms may have been drawn upon, and dealers do not think the consumption has fallen off so much as indicated here.

Massachusetts Crop Report.

In its crop report for October, the final issue of the season, the Massachusetts State Board of Agriculture includes the following summary of crop conditions and the results of the season, compiled from the reports of about 150 correspondents:

Corn was very backward throughout the season and in localities where early frosts occurred was almost a total failure, both for grain and stover. Elsewhere a partial crop of both was secured, but in all localities there were many fields which made very poor yields. The crop was better in eastern sections than in the western counties, but nowhere did it approach an average crop. Probably the value of the crop is not far from two-thirds of the normal, taking all parts of the State into consideration, and also considering the value of the grain and stover, and of that portion of the crop raised for ensilage.

Root crops generally proved to be good average crops, the number reporting them to be below the average being fully balanced by those who speak of them as being extra good. Potatoes are a light crop as a whole, owing to rot, but very good prices have prevailed. Celery appears to be a very good crop.



(Photo by Notman.)

MR. HENRY M. UPHAM,

Who retired from business yesterday after 36 years' connection with the "Old Corner Bookstore."

Feed in pastures has been good throughout the season, and still continues green in most cases. Farm stock is, therefore, almost invariably reported to be in good condition, and will go into the barns for the winter in prime flesh and good condition as regards health.

Less than the usual amount of fall seeding has been done, farm work being behind the first part of September and the frequent rains since then having made the fitting of the ground difficult. That which was put in early is in excellent condition, the frequent rains having been very beneficial. Late seeding made a good catch, but is, of course, somewhat backward for the time of year.

Of the 141 correspondents answering the question in regard to prices received for crops raised for market, 70 speak of them as average, 66 as higher than usual and 5 as lower than usual. The general trend of prices seems to have been upward, although shortages or particular crops doubtless operated to increase the movement.

There is the usual diversity of opinion among correspondents as to the crops which have proved most profitable, sixty-two, less than a majority, uniting on potatoes. Forty-one consider hay to have been among the most profitable crops; thirty-two, apples; ten, oats; eight, corn; seven, tobacco; seven, cranberries; six, cabbages; six, sweet corn; six, strawberries. Sixty-four correspondents, an unusually large number to unite on any one crop as among the least profitable, speak of corn as among the least profitable crops; twenty-seven, potatoes; nine, hay; seven, tomatoes; six, apples.

Judging from the returns the present season has not been an unprofitable one for our farmers as a whole, although perhaps not up to some recent years in profit. Corn and potatoes are the only principal crops which show a shortage, and in the case of the latter good prices somewhat compensate for the short crop. Good prices received for most crops together with quick sales have been factors making for profit.

Of the 144 correspondents answering the question in regard to the profits of the season sixty-two consider the season as profitable, eleven as above the average for profit, sixteen as an average one for profit and eighteen as fairly profitable, while thirty-seven think that it has not been a profitable one.

This report will also contain selected reports of correspondents, information as to climate and crop conditions throughout the country, and an article on "Greenhouse Construction and Management," by Prof. S. T. Maynard. It may be obtained by application to Hon. J. W. Stockwell, Secretary State Board of Agriculture, State House, Boston.

New York's First Lumbermen.

A history of the lumber industry in this State has just been issued by the Department of Agriculture. It was prepared by Col. William F. Fox, superintendent of forests in this State, and contains historical matter, which Gifford Pinchot, head of the United States Bureau of Forestry, says is in this work made readily accessible for the first time.

The first lumbermen in this State, says Colonel Fox, were the first settlers, who cleared spaces in the primeval forests for their homes and farms. The rough lumber for their cabins they made with their axes, in the use of which they were very expert.

Saws, operated by hand power, came next, and then before many years the sawmill. In many instances the sawmill preceded the gristmill, and in a few places the erection of the mill antedated the advent of the first settlers.

Colonel Fox says that the widespread impression that lumbermen are responsible for the lack of forests in many parts of this State is erroneous. From the time of the early settlers to the present day lumbermen have never resorted to clearing work.

It is the farmer who is responsible for the absence of forests. In clearing his land the farmer has always cut and burned every brush and tree in his way. The lumberman, on the contrary, takes only a few scattered trees from each acre, confining his selections to merchantable species.

In 1614, when the first houses were built on Manhattan Island and at Albany, New York was forest-covered throughout. It was a silent, unbroken wilderness, which in grandeur and undeveloped wealth was unsurpassed in all the region of the Atlantic coast.

In this forest the valuable white pine was plentiful and conspicuous everywhere by its towering size. The height of these white pines ranged from 130 to 160 feet, with a diameter, breast high, of from two to four feet. In some localties there were trees of even greater size, some said to have been 255 feet high and eighty inches in diameter.

There is a record of one white pine, cut in the town of Meredith, Delaware Co., that measured 247 feet in length as it lay on the ground. Pine street in this city, it is said, took its name from the magnificent pines that once adorned the farm of Jansen Damen.

A sawmill was built and operated by colonists here one hundred years before there was one in England. It was the direct result of the conditions and demands of the lumber industry here.

As villages sprang up and became important trading-posts, the demand for building material and ship-timber was greater than the supply. Large timbers for house and ship-building were hewn out and squared with the broad axe by men who were expert with this tool, while the planks, boards and boat-sides were made by pit-sawing.

In 1623, nine years after the first house was built at New Amsterdam, three sawmills were erected by the Dutch West India Company, and with their erection the history of lumbering in this State really begins.

These mills were shipped from Holland and run by water power or wind power. One was built on Governor's Island, and another stood on Sawmill creek, a tributary of the East river.

In 1639 the Governor's Island mill was leased at an annual rental of five hundred merchantable boards, half ash, half pine. About the same time some sawmills were built at Fort Orange (Albany) and the growth of the industry is shown in a letter from the Earl of Bellomont to the Lords of Trade in England, dated Jan. 2, 1701. It is as follows:

"They have got about forty sawmills up in this province (the province of New York), which, I hear, rids more goods or destroys more timber than all the sawmills in New Hampshire. Four saws are the most in New Hampshire that work in one mill, and here is a Dutchman, lately come over, who is an extraordinary artist at those mills. Mr. Livingston told me this last summer, he had made him a mill that went with twelve saws. A few such mills will quickly destroy all the woods in the province at a reasonable distance from them."

The lumbermen of New Amsterdam were an enterprising lot, shipping lumber to Holland as early as 1626, three years after the first shipload of immigrants arrived, and later to England. The good ship Arms of Amsterdam carried the first consignment of lumber from here to Holland, and in 1675 the ship Castle carried a cargo of timber valued at £400 from New York to England.

Early lumbering was a dangerous business, and Colonel Fox says that it is remarkable to find how often the first death in a new settlement was the result of a falling tree, a log crush or a sawmill accident. There are records of curious accidents in the early days, a characteristic one found in the records of the town of Middlebury, Wyoming Co., being as follows:

"In May, 1817, Artemas Shattuck went into the woods to chop. While cutting off a log that had been partially split open, his foot was caught in the crack, and he hung for a long time suspended by his foot and partly supported by one hand. Despairing of receiving aid, he finally unjointed his ankle with his pocketknife, made a crutch of a crooked stick, and started for the house."

The local market of sawmills was limited to the distance which the lumber could be transported on wagons. There were no canals or railroads to furnish an outside market, and so rafting was resorted to.

Arthur Noble of Herkimer County rafted a lot of lumber down West Canada creek to the Mohawk and thence to Cohoes Falls, from where it was carted to Albany, placed on sloops and shipped to Ireland as early as 1790. Edward Edwards ran the first raft down the Chenango river from what is now the town of Lisle, in 1796.

Rafting opened the world to many young men. It was a life of peril, this rafting, but there was no lack of men to undertake the work, and so important did rafting ventures become that the entire commercial prosperity of a place often depended on the success of the raftsmen. All notes given, says Colonel Fox, were made payable "when the rafts get back."

Colonel Fox tells about rafting on the Hudson, Susquehanna and other rivers in the State, and gives a long and technical description of the construction and handling of a lumber raft. There is an interesting account of the early opposition to the use of streams for the purpose of floating logs to the mills, which was gradually overcome by the passage of laws declaring rivers public highways. The first law of this kind was passed in this State in 1806.

This log driving was a dangerous business, and Colonel Fox tells something of it. He says:

"In the lake region of the Adirondacks, river drivers had the additional task of moving their logs through the lakes, where there was no current to assist their progress, but too often a contrary wind, that drove their logs back or scattered them. In passing through these lakes lumbermen generally rafted the logs or inclosed them in strongly connected booms, and then warped their way through the open water by using an anchor, a long heavy cable, and an upright windlass placed on the forward end of a strongly constructed raft.

"This work was often done at night, or whenever the lake was still and free from the strong winds, so prevalent in early spring. Old river drivers, in telling of the early log-drives, still describe how, through the long hours and darkness, they leaned wearily against the capstan bars as they tramped round and round the platform while 'kedging' their way through the lakes.

"The work of the river drivers was perilous. Scarcely a season passed without some one being drowned or killed on some stream.

"Men were crushed under swift-rolling logs at the banking grounds, chilled to death in the icy waters, or killed in breaking the great jam which formed at every obstruction in the river. The most dangerous work was usually done by volunteers, and if all the deeds of heroism and self-sacrifice performed by river drivers while attempting to save the life of some comrade in danger were recorded, they would be found to equal anything in the histories of fire, flood or battlefield.

"The drivers were necessarily men of stalwart build and superb physique. With surprising agility they would leap from log to log while they were running down the rapid, swirling current, and, standing upright on a small log, with nothing to aid them but a pike pole or lever, they would guide their treacherous craft as skillfully as an Indian his canoe."

Colonel Fox's account of modern lumbering methods makes an interesting contrast to the early methods. He has devoted considerable space to the matter, and the work is one of the most exhaustive on any subject ever issued by the Department of Agriculture.

Literature.

Sir Alfred Lyall, K. C. B., is the author of the life of Tennyson in the English Men of Letters Series, one of the latest additions to this notable series of biographies. "It is in Tennyson's poetry, moreover, that we must look for the chronicle of his life," writes Sir Alfred as he introduces his subject. Tennyson's father was a man of various talents, somewhat of a poet, a painter, an architect and a musician. In the schools at the time of Tennyson's childhood, punishments were frequent and rough, so that "a child lived between the fear of the master's rod and the bullying of his big schoolmates, and probably learned little more than the habit of endurance. But Tennyson's school of experiences, though early, were fortunately short, for after two years he was removed from Louth, and it appears that for the next ten years he was taught at home by his father, whose schoolship was considerable."

Before Tennyson left Cambridge his poems, chiefly his lyrical, were published. Thus, a new poet had arisen and was welcomed. Political and religious questions crowded themselves upon the poet, who by his poems announced that he was a thinking man. As the biographer says: "In his religious speculations he ponders over the question why God created souls, knowing they would suffer and sin, and finds it unanswerable except in the firm hope of universal good as the outcome, which is the reasoned conclusion of those who find the design of human life in this world unintelligible unless another world is brought in to redress the balance, and which is thus the mainspring and support of belief in a further existence." Of Tennyson's dramatic monologues, Sir Alfred considers Ulysses to be the finest in purity of composition and drawing of character, and Tithonus the most beautiful conception of the mythological Greek mind reset in harmonious verse. Arthur Hallam died at Vienna in 1833. Some of the sections of Tennyson's monumental eulogy upon his friend were written very soon afterwards, and their number had rapidly increased by 1841, when Edmund Lushington first saw the collection and heard the poet recite some of them. In 1850 "In Memoriam" was published, the outcome of seventeen years of meditative composition. "Of all Tennyson's continuous poems," says the biographer, "it is the longest and most elaborate; it affected profoundly the minds of the generation among whom it appeared; it embodies the writer's philosophy upon the ever-present subject of life and death, upon all the problems suggested by the mutability of the world's face and forms, and on questions whether human mortality may not fall within the scope of the universal natural law, whether faith in things spiritual is a true intuition or no more than a hopeful conjecture than a painting of

The shadows that are beneath
The wide winding caves of the people tomb.

Following "In Memoriam" came "Maud," the "Idylls of the King" and "Enoch Arden," which contrasts the style of the former. The pastorals, among which poems is the "May Queen," are annals of the village, in youth and age, told seriously and sweetly. Sir Alfred Lyall has presented Tennyson, the poet, and his words bespeak deep thought and firm conclusions. He analyzes keenly Tennyson's poems, and renders clear that which may seem dim to the reader. The book does justice to its eminent subject. Sir Alfred Lyall treats the honored poet laureate of England with a sweet dignity of manner, evidences his sympathy with Tennyson, and denotes his admiration for his poems. At the same time he estimates fairly the talents which the great poet possessed without dwelling at length on his private life. [New York: The Macmillan Company. Price, 75 cents, net.]

Charles G. D. Roberts gives us his usual fine descriptions of nature's moods and surrounds his characters with the healthy atmosphere of the green fields and the gladsome sunshine in this new book, "Barbara Ladd." Miss Barbara is herself the child of nature with varying moods which often lead her into reckless adventures. Her guardian, Uncle Bob, has placed her in the care of her aunt, Mistress Mehitable, whom Barbara calls Aunt Hitty. Her aunt is reinforced in her guardianship by the aid of Dr. Jim and Dr. John, two brothers, who constitute themselves protectors of Barbara and indulgent mitigators of Mistress Mehitable's conscience. There is a love tale between these two brave, strong men and Mistress Mehitable; each considers the other preferred, so the years roll by and the lady remains unmarried. The entrance of Barbara into their midst furnished many excuses for frequenting her home. For these two men Barbara entertains a firm affection, but there seems to be a constant misunderstanding between her and her aunt. Because of this Barbara determines to run away to her uncle. She makes the attempt, but is captured by Dr. Jim and Dr. John, carried back home, accompanied also by Robert Gault, whose acquaintance she made on her trip. The next day her aunt had a long talk with Barbara, concluding with, "I failed to realize that you are no longer a little girl, but nearly a grown woman. Many girls are grown women at your age, Barbara, so that I have decided on something which may surprise you. From this time forward I shift my responsibilty for you largely on your own shoulders and shall hope to be more your friend than your guardian. I hand you over to yourself, Barbara. You must learn to discipline yourself!" From that day a warm friendship existed between Barbara and Mistress Mehitable, although patience was an article used in quantities by both parties. Robert Gault became Barbara's devoted admirer, although the capricious maid caused his heart many an ache. Rumblings of the Revolutionary war soon filled the air of this Connecticut village. Barbara went to New York to shine in Colonial society there as her Uncle Bob's ward. Robert became an officer in the King's service, and as a result, Barbara, an ardent Colonial patriot, hardened her heart against him. A duel fought by Robert because of her caused a temporary cessation of the strained relations, but although Barbara avoided all reference to politics, the questions had to be finally settled. She almost pleaded with the young man to leave the King's side and join her own, but not even for his great love would Robert prove traitor to the cause which he had espoused. The war becoming serious, Barbara returned to her aunt's. There anxious days were passed. Barbara soon knew that she would welcome Robert regardless of the side he had taken in the conflict, and when she discovered him wounded and apparently dead, near her own home—well, the reader may imagine the outcome. Barbara Ladd is a fascinating heroine, whose love of nature recalls Miranda in "The Heart of the Ancient Woods." The manliness of Robert Gault, the loving unselfishness of Dr. Jim and Dr. John, the fine, gentle qualities of Mistress Mehitable and the kindly Uncle Bob are all characters we will loath to leave. Even "Old Debby," the old woman living alone in her cabin, to whom Barbara carried all her troubles in childhood, is made real to the reader. The whole book manifests fine, sympathetic and generous instincts. [Boston: L. C. Page & Co. Price, $1.50.]

This is a book of illustrated recipes, called by its author, Mary Ronald, "A Cook's Picture Book." The term is well used, for the contents are arranged in a most attractive form, with illustrations of the dishes of which recipes are given. Two hundred and eight photographs illumine the 223 pages. The arrangement of the book makes it possible for the housekeeper to readily make up a menu, and easily find new dishes to vary the monotony of the daily fare. The first of the fourteen chapters is a dissertation on the preparing and giving of luncheons, and the balance contains recipes for all the dishes that can be prepared for every kind of a luncheon. The illustrations show tempting dishes properly garnished and ready for serving. The chapter on breads is particularly interesting. Americans, as a rule, do not prepare fancy breads as much as some other nations, the English or French, for example. The preparation of salads has been given special attention, and there are recipes for many varied kinds. Meats are arranged in most pleasing ways for serving. Garnishing with potato is a favorite way, especially in soft-fish dishes. To serve food in a tempting manner is a fine art, and the housekeepers would find that their dishes would be relished more if care were given to the manner of serving the desired food. A little care could be most profitably spent in this study. All housekeepers will find this book most valuable, both in the matter of entertaining and in preparing every-day menu courses. [New York: The Century Company. Price, $1.40 net.]

Poultry.

Practical Poultry Points.

V. F. Hunter says in the Practical Farmer that he never has seen a case of "chicken cholera," though he once took a journey of two hundred miles to visit a place where it was reported. We never went as far as that in search of it, but we never have seen a case in over fifty years experience with poultry. He says he always found that the trouble was due to a lack of grit and green food. We have often found that the cause of the bowel trouble that had been mistaken for cholera, but we once bought a small poultry house of a party who said he had lost his whole flock by cholera. We thought if that was the case that the infection would be more in the soil than the boards, and as we wanted another house to separate our young cockerels from the pullets, we bought it. It was not such hard scratching to move it, but we did some hard scratching afterward. Never did we see a building so badly infested with lice and mites, and not until we had given it a pretty good soaking with kerosene around the roosts, sills and other points that we could reach with a brush, and then fumigated it with the burning of charcoal and sulphur, did we venture to put any chickens in it. But we never had any cases of cholera among those we put in it, though they were confined to it for some days before we could build a yard for them to run in. Nor did we lose a bird out of the flock. We think that nearly all cases of so-called cholera in poultry can be charged to lack of proper feeding, accumulation of filth under the roosts, and the presence of blood-sucking vermin. There may be genuine cases of cholera, but as we never saw one, we are unwilling to believe that they cannot be traced to one of these causes.

It is time now to begin to fatten the turkeys that are to be slaughtered for Thanksgiving. Only about four weeks later, and they can scarcely eat too much in that time. To induce them to eat give them a variety of food. Use whole corn, soaked corn, cornmeal mash with some beef scraps in it, or skimmilk, if it can be spared, and keep grit, charcoal and pure fresh water where they can get to it as they please. If they are a good breed and well fed they will pass for Vermont turkeys, even if grown on Cape Cod. Before beginning to fatten separate from them those intended for breeding next year, and those that will not be large enough for market before Christmas or later, and feed them for growth rather than for fat. The Christmas turkeys can be put on the fattening diet as soon as the Thanksgiving lot has been removed. We were also intending to say something about fattening the chickens and such old fowl as remain to be sold, but the advice in regard to turkeys is also good advice in regard to chickens, and as for old fowl, there should be none to kill now. They have scarcely recovered from the effects of moulting now, and they should begin to lay soon, and will lay decently well all winter if properly fed and cared for.

The Pekin or other ducks that are to be kept over winter for breeders should be two years old if possible, or at least very early hatched birds, as they seldom lay until a year old, and the two-year-old birds are the best layers. They need a comfortable house with a dry earth floor, well covered over with dry straw or meadow hay. Close this up at night after they have gone in or been driven in, and when it is time for them to begin laying keep them confined until after nine o'clock in the morning, as they usually lay before that time, and if at large will drop their eggs where they chance to be. The litter in the house should be turned over two to three times a week, and when weather is good it may be taken out in the sun and dried, and the house scraped out. If the weather does not allow this to be done, take it out entirely and put in a new lot. This should be done whenever the litter gets badly soiled, and does not dry out nearly clean.

They may not absolutely need water to swim in, but the breeders will be the better for an occasional swim and wash, and they must always have a supply of fresh water by them, especially when eating, as they get their nostrils filled with dough, which they need to rinse out. Because of this, they need fresh water every time they are fed. A good feed for them is about one-half corn meal, one-quarter wheat bran, one-quarter green food or cooked vegetables, with a handful of beef scraps for every quart. Mix coarse sand with this in about the same amount as the beef scraps, and keep grit and oyster shells by them all of the time. Feed rather light till they begin to lay, and then feed well two or three times a day. Whole corn may be given once a day for a change, but if they get too fat, give less corn and meat and increase the proportion of green or vegetable food and bran.

Where foods like ground beef scraps or desiccated fish, ground or crushed bone, oyster shells or even pure water are to be kept before the fowl all of the time, they should be so placed that the fowl cannot get into them at any time, and they are best so placed along the wall that they will not gather much of the dust that may be raised by their scratching on the floor. Like all other stock, the purity and cleanliness of the food is of about equal importance to the account. If a bird or an animal wants to eat gravel or dirt let them choose their own, until the cause of this desire can be ascertained, and then try to give them something better and cleaner. We have known a gravel-eating hog to be cured of his propensity by giving him a half-bushel of charcoal, and a cow that had an appetite for the straw from the horse stables to lose it when she had plenty of salt and ground bone. So, if the fowl prefer to drink from a not unclean pool of water, see if the flavor they are seeking cannot be found in a purer source.

Poultry and Game.

The market is overstocked with Western poultry, and trade is very dull. Fresh-killed Northern and Eastern offered in only small lots, with moderate demand. Choice roasting chickens 16 to 18 cents, common to good 12 to 15 cents, broilers 15 cents. The best fowl bring 13 to 14 cents, common to good 11 to 13 cents. Green ducks 14 to 16 cents and geese 15 cents. Turkeys continue to come very light and thin; few bring over 16 to 18 cents, though dealers would be glad to pay 20 cents for really prime lots, common to good 12 to 15 cents. Pigeons steady at $1.50 a dozen for choice, 75 cents to $1.25 for common to good. Choice large squabs $2 to $2.50 a dozen. Western-iced chickens, choice large 12½ to 13 cents, fair to good 10 to 12 cents. Broilers, 1½ to 2 pounds, 14 to 15 cents, choice fowl 12½ cents and ordinary 11 to 12 cents, old roosters 9 to 9½ cents. A few Western turkeys bring 13 to 14 cents, but most of them sell at 10 to 12 cents, old turkeys 14 cents.

But little game comes in yet, and prices are very steady. Black duck $1 a pair, teal 75 cents and small shore birds 50 cents to $1.50, redhead ducks $2.25 to $2.50 a pair, butter balls $1.50 to $1.75, widgeon $1 a pair, snipe $3 to $3.25 a dozen, plover $6 to $7 a dozen and quail $4. Venison in fair supply, whole deer selling at 15 to 18 cents, saddles 20 to 25 cents, moose 10 to 18 cents whole and bear 15 to 18 cents.

Horticultural.

Wild Flowers for the Table.

My experience with wild flowers for table decoration was the result of a vacationless summer. When longing for the country as never before, I resolved to treat myself to a half day's excursion each week into the suburbs (of Boston) and gain a closer friendship with the beautiful wild things. My little outings were always within a ten-cent trolley limit, more often a five-cent ride, Stony Brook Reservation and the Fells contributing most largely, and by care in keeping them, changing the water daily and cutting off the water-soaked ends, I managed to have flowers upon the table throughout the entire summer and autumn.

The inspiration came early through the gift of a friend in the country of a box of arbutus, that sweet messenger of the spring Missing the hepaticas, my first trip brought me only violets and anemones, the latter shy and frail, but the violets lasted many days, and were truly beautiful tied with grass in tiny blue and white bunches, just the thing for finger-bowl decoration. My second trip resulted in quantities of Solomon's seal, saxifrage and bluets, while one week later I found that the columbines had unfolded; the rocky pastures were fairly reddened with the gaily nodding blossoms. The generous bunches I brought home were speedily distributed, since they were to look well only a few days, but the wily Jacks in the pulpit I found the same day, hiding among the brakes that followed a brook, kept throughout the week. Some were green and white, others had that curious brown pink seen only in wild flowers.

The same brook on the next expedition presented me with an abundance of fleur de lis and arrow heads, and following its serpentine course, I found a treasure indeed, in the wild forget-me-nots that had opened their shy blue eyes since the week before. It may be said here, that these dainty flowers are easily overlooked, and, unless one searches diligently they are sure to pass them by.

The wild geraniums were now beginning to open, and the week later I found the sunny slopes of the pastures blue with these gay blossoms, shading from light pink to deep violet. Knowing that like the columbine these would soon fade, I also gathered great bunches of clover, both red and white being at its best. How strange that clover is but half-appreciated! When the white clover that our grand dames "set such store by" for perfuming their linen shades from green white to the most delicate shell pink and red brown, and the sturdiness of the red or bush clover is an inspiration in itself, and the high sweet clover that covers the unattractive rubbish heaps surely preaches a much-needed sermon that environment does not always control character.

My search for ladies' slippers and mountain laurel was unsuccessful that year, but sheep laurel was at its best, and gathered with rockfern and blueberry blossoms, the combination was not in the least to be despised.

Buttercups and daisies were next upon the list, always plentiful and loved by little children. Their combination was a welcome addition, while the next outing brought me one of my favorite bouquets, that, to my mind, excels many of the florist's combinations, wild roses, swamp pink and wild carrot; nothing could be more fragrant, the feathery carrot disks giving the final touch to the pink and white of the others. By cutting long stems and buds, the roses lasted many days, also the swamp pink (known in some places as wild honeysuckle) could be made to last indefinitely by pulling off the petals as they dried, one by one. Bidding goodby to the spring flowers I now make friends with some brilliant July beauties, the wood lily, the meadow lily and the yellow daisy, and in shaded places finding still some swamp pink and bush honeysuckle had sweetness as well as brilliancy.

The meadow rue was also at its best, as lacelike as baby's breath, just what we like for toning down the snowy lilies. A bouquet of bee balm, wild peppermint, and bayberry gathered about this time, found such favor that it was borne away bit by bit by those who chanced to admire and smell, until not a leaf remained.

A combination that required the largest vase in the house was brought home next, cat-o'-nine tails, and button-bush, which stood in the corner of the hall, until the nine-tails had departed, in the hands of some delighted small boys. The fragile jewel weed seemed scarcely worth the gathering, still it was a specimen, but the nightshade which grew among it lasted many weeks, the rich purple blossoms claiming much attention, and the thrifty vine growing several inches in the vase of water.

During all this time I did not neglect the smaller flowers, such as heal-all, wood waxen, butter and eggs, cranberry blossoms, cinquefoil, shin-leaf, bunchberry, beach pea and partridge vine, all of which were effective in finger-bowls, the scarlet bunchberry especially so; and the purple beach pea giving much satisfaction. When using these lesser lights I sometimes obtained fine effects with vines, such as the horse-briar, woodbine and wild clematis, arranging them about the table mirror with small bouquets at the corners.

In the autumn, the woodbine reddened by jack frost and adorned with its purple berries, was equally effective, and the clematis, burst into feathery loveliness, was hung upon chandelier and over the pictures.

A favorite summer flower was ladies' tresses, known in some places as wild hyacinth; its fragrance is delicious and arranged with small ferns, it is a very happy combination.

A centrepiece of which I was justly proud was arranged from a cluster of Indian pipes (I felt myself fortunate in finding these ghostly flowers, when they are hunted so closely), with tiny ferns, wintergreen and partridge vines tucked about them. By taking up a good quantity of the leaf mould, the pipes stood white and erect for nearly two weeks.

Water lilies were seen, but always out of reach, but following the dry bed of a brook I found the most beautiful cardinal flowers I ever gathered, they were the envy of the community and were subdivided for the benefit of said community.

And now the goldenrod was out, putting its touch to hillsides and roadways. One never dreams that there are over eighty species native to our country until they begin to gather it and study it. I have found it as far south as Florida, many varieties of it, and if it is true that it grows in every State of the Union, it certainly has an unquestioned right to the national flowership.

Failing in my search for a fringed gentian, I was obliged to content myself with the closed gentian, and hugh masses of wild asters (their varieties are even greater than the goldenrod), also some large clusters of elderberries for the jardiniere, almost as beautiful as when in blossom, and a bunch of bright cranberries, which was greatly admired when put into a pretty glass dish.

Jack Frost had now claimed most of the wild things, but two more outings were possible; one gave me bleached ferns, autumn leaves, barberries and a few brave asters; the next rock ferns, immortelles, bitter-sweet, tiny wild grapes, purpled and thickly clustered, and some of the most perfect cones I ever saw. How we prized those last treasures! some of them lasted until the Easter, brightening the rooms most wonderfully.—New York Observer.

Export Apple Trade.

The total apple shipments to European ports during the week ending Nov. 1, 1902, were 79,980 barrels, including 14,787 barrels from Boston, 23,964 barrels from New York, 2312 barrels from Portland, 38,917 barrels from Montreal and none from Halifax. The total shipments included 41,494 barrels to Liverpool, 5924 barrels to London, 24,900 barrels to Glasgow and 7362 to various ports. The shipments for the same week last year were 35,206 barrels. The total shipments since the opening of the season have been 351,887 barrels, against 241,579 barrels for the same time last year. The total shipments this season include 243,326 barrels from Boston, 262,252 barrels from New York, 13,766 barrels from Portland, 306,765 barrels from Montreal and 25,778 barrels from Halifax.

Since the apple season began, shipments from Boston have been heavy, but steamship Saxonia broke all previous records by a large margin when she sailed for Liverpool, shortly after eleven o'clock this forenoon, with 28,508 barrels of this fruit stored away in her holds. It is probably the largest single shipment of apples ever sent abroad. The Saxonia also had 90,000 bushels of wheat, 25,000 bushels of corn, 600 tons of provisions, 700 tons of flour, 400 tons of hay, 1500 dressed hogs, 54 tons of cheese and 500 tons of miscellaneous merchandise.

In view of the invasion of the English market by the United Fruit Company with the banana, chief rival to the apple, and of the splendid apple crop harvested in the United States this year, 43,000,000 barrels against 27,000,000 barrels last year, it is interesting to note that British apple-growers have had a disastrous season, and that a large market awaits foreign fruit in England this season. A keen frost in the middle of May blighted nearly all the English orchards.

As early as 1880-81 we exported to England 1,330,000 barrels of apples. This was not exceeded till 1888-9, when 1,410,000 barrels were sent. This number was only once slightly exceeded up to 1896-97, when 2,927,000 barrels were shipped. This phenomenal export was followed by smaller supplies, until in 1901-02 less than 800,000 barrels were sent.

So far this fall, shipments of apples are 771,907 barrels, against 206,373 barrels a year ago, and 424,724 barrels in the same period of 1900-01. Complete shipments for the apple year are considered likely to fall little short of the extraordinary record in the "apple year" of 1896-97. The great bulk of winter apples has yet to come. From Boston, apple exports to date are 230,000 barrels, against 14,000 barrels a year ago. The chief ports of shipment are Halifax, Montreal, St. John's, New York, Boston and Portland.

The only competitor that the newly introduced American banana will this year have to fear in the English market will be the American apple.

A cable dispatch on Monday from J. C. Houghton & Co., Liverpool, says: "Steamer New England selling; 27,000 barrels sold. Demand active for best qualities and descriptions. Fancy Baldwins $2.88 to $3.60, No. 1 $2.40 to $2.78, No. 2 $1.44 to $1.80, Baldwins in general $1.92 to $2.40, Kings $1.80 to $2.64, Greenings $1.92 to $3.60 Golden Russets $2.40 to $3.60."

Cables from London of Oct. 28 say: "Baldwins $2.76 to $3.48, Roxbury Russets $3.84 to $4.32, Spys $2.28, California Newtowns, 4½ tiers, $1.92 a box. Many parcels arriving in soft condition. Prospect favorable for best qualities." George R. Meeker & Co. say, Oct. 29: "Pears are arriving in poor condition, and unless they are very sound we would not advise shipping abroad."

THOROUGHBRED COLLIE DOG.
Owned by M. M. Palmer, Esq.

Boston Fish Market.

There is a good supply of fresh fish, but the demand is steady. Prices are a little lower on shore fish. Market cod sells at 2½ cents a pound, large at 4 cents and steak at 5½ cents. Haddock is 3 cents, hake 2½ cents, pollock and cusk 2 cents and flounders 3 cents. Striped bass are 18 cents, black 10 cents and sea bass 8 cents. Mackerel are 30 cents each for large, 11 cents for medium and 8 cents for small. Herring $1.50 a hundred. Tautog 4 cents a pound, squiteague 7 cents and scup 6 cents. Bluefish 9½ cents, white fish 10 cents, butterfish 7 cents. Native smelts 18 cents for large, 14 cents for small. Eastern 8 cents. Southern fish steady. Pompano 22 cents, snappers 18 cents, sheepshead 23 cents and Spanish mackerel 20 cents. Lake trout are 12 cents and sea trout 7 cents. Halibut are 10 cents for white, 7 cents for gray and chicken. Western salmon are higher at 14 cents. Pickerel steady at 12 cents, perch 10 cents for white and 7 cents for yellow. Eels and fresh tongues steady at 10 cents, cheeks 8 cents. Clams in good demand at 50 cents a gallon, $2.50 to $3 a barrel in the shell. Scallops 1.75 a gallon and shrimp $1. Lobsters 17 cents a pound alive and 19 cents boiled. Oysters in good supply and demand at $1 to $1.10 for ordinary Norfolk, $1.10 to $1.20 for selected Norfolk and fresh-opened Stamfords, $1.25 to $1.40 for Providence River.

Vegetables in Boston Market.

The supply of vegetables begins to decrease and certainly is not large for the season of year. Prices are a little higher than they have been. Beets and carrots are 50 to 60 cents a bushel, parsnips 75 to 85 cents and flat turnips 40 to 50 cents, yellow turnips $1 to $1.25 a barrel. Native onions are 75 cents to $1 a bushel, $2.50 to $2.75 a barrel, Western small barrels $2 to $2.25, Spanish onions $2 a large crate. Leek 50 to 60 cents a dozen bunches. No chives in this week. Radishes 65 to 75 cents a box. Salsify $1 to $1.25 a dozen. Early celery 50 to 75 cents and Boston Market $1.25 to $1.50 a dozen. Cucumbers $7 to $8 a hundred. Peppers 90 cents to $1 a box. Native tomatoes $1.50 to $2 a box and hothouse 25 cents a pound. Egg plant $2 to $2.25 a dozen. But few summer squash come in now, and they are quoted at $1.50 to $1.75 a crate, with Marrow and Turban at $1 to $1.25 a barrel, Western Hubbard $15 to $20 a ton. Pumpkins 75 cents to $1 a barrel. Artichokes $1.50 to $1.75 a bushel and mushrooms 75 cents to $1 a pound.

Cabbages are plenty at 60 to 75 cents a barrel, $2 to $4 a hundred, with red cabbage 75 cents to $1 a box. Cauliflower 90 cents to $1 a box of eight. Sprouts 15 to 17 cents a quart. Hothouse lettuce $1.50 to $2 a barrel box. Spinach and parsley 25 to 35 cents a bushel. Romaine $1 to $1.50 a dozen, escarol 75 cents to $1 and chicory 50 to 60 cents. Southern green peas $1.50 to $2 a bushel basket. Virginia string beans in liberal supply at $1.25 to $1.50 a half-barrel basket. Sieva beans $2.25 a bushel and Lima $2.75. Mint 75 cents a dozen and cress 40 cents.

Potatoes in full supply. Aroostook Hebrons 65 to 68 cents, Green Mountains 68 to 70 cents, New York round white 63 to 65 cents and Western 60 cents. Sweet potatoes in good supply, with moderate demand. Norfolk yellow $1.50 to $1.75 a barrel, Eastern Shore $1.50 to $1.65, Jersey double-head barrels $2 to $2.50, in light supply and steady demand.

New York Market.

Potatoes are in good demand and firm at quotations. Long Island are $2 to $2.12 a barrel, Virginia second crop $1.75 to $2, Jersey $1.75 to $2 per barrel or sack, Maine $1.75 to $1.87 a sack, Michigan 180 pounds $1.75 to $2, other Western $1.67 to $1.87. Sweet potatoes quiet but steady. Southern yellow $1.25 a barrel and Jersey $1.75 to $2.75. Beets 75 cents to $1 a hundred bunches and carrots $1 to $1.25. Celery is 30 to 40 cents a dozen roots for prime large and 5 to 25 cents for small to medium. Onions in larger supply, but fancy lots have advanced in price. Connecticut white $2 to $5 a barrel, yellow $2 to $2.50 and red $1.50 to $2. Long Island and Jersey yellow $2 to $2.25, red $1.50 to $1.75. Orange County white 75 cents to $2.50 a barrel, yellow $1.75 to $2.25 a bag and red $1.50 to $1.87. White pickle onions $3 to $6 a barrel, baskets $1 to $2. Parsnips $1.25 to $1.50 a barrel, pumpkins 60 to 75 cents, peppers 75 cents to $1 a barrel for green and $1 to $1.25 for red. Radishes from Norfolk 40 to 60 cents a basket, Marrow squash 75 cents a barrel and Hubbard $1. White turnips $1.50 to $2 a barrel, Russia 75 to 80 cents for Canada, 60 to 70 cents for Jersey.

Cabbages are dull at $1.50 to $2 a hundred. Cauliflower in small supply, fair to fancy at $1 to $2.25 a barrel and culls 50 to 75 cents. Sprouts 4 to 12 cents a quart, hothouse cucumbers 75 cents to $1 a dozen and Florida $1.50 to $2 a crate. Egg plants from Florida $1.25 to $2 a box. Norfolk kale 25 to 50 cents a barrel. Boston lettuce 25 to 75 cents a dozen, Western 75 cents to $1 a box of 1½ dozen, North Carolina $3.50 to $4.50 a barrel, $1.75 to $2.25 a basket, Norfolk 75 cents to $1.50 a basket. Southern peas 50 cents to $1.25 a basket. Virginia string beans 50 to 90 cents, Charleston wax 50 to 60 cents and North Carolina 25 to 50 cents per basket. Norfolk spinach $1 to $1.50 a barrel, Baltimore $1 to $1.25. Lima beans, potato 75 cents to $1.25 a bag and flat 50 to 75 cents, Florida okra $1.25 to $2 a carrier.

Apples in liberal supply, and while best lots sell readily, there are too many of medium and lower grades that go slowly and at low figures. Some fancy red table varieties sell at $3 to $4 a barrel, King, Spitzenberg and Gravenstein at $1.50 to $3, Ben Davis $1.50 to $2.75, Greening, Twenty-ounce and Maiden's Blush $1.50 to $2.50, Hubbardston $1.25 to $2.25, Baldwin $1 to $2.25, Pound Sweet $1 to $2, common grades 75 cents to $1. Open-head barrels 75 cents to $1.50. Crabapples $3 to $4. Pears in moderate supply, and fancy are firm. Inferior lots dull. Seckel are $4 to $6 a barrel, Bartlett $3 to $5, Bosc $2 to $4, Clairgeau and Sheldon $2 to $3, Duchess $1.50 to $2.25, Lawrence and Louise Bonne $1.50 to $2, Keifer and common cooking grades $1 to $1.50. Apple quinces $3 to $6 a barrel.

Cranberries are in good demand and higher. Cape Cod large fancy $7.50 to $8, early black fancy $7, fair to prime $5.50 to $6.75, or $1.80 to $2.40 a crate, Jersey $6.25 to $6.75 a barrel, $2.10 to $2.25 a crate. Grapes in good demand and firm for all but Catawba. Up-river cases, Delaware 75 cents to $1.50, Niagara 75 cents to $1.25, Concord 60 to 75 cents, western New York small baskets, Delaware 10 to 20 cents, Niagara 10 to 18 cents, Catawba 10 to 13 cents, black 9 to 12 cents and large red 8 to 10 cents; large baskets, black 17 to 18 cents. Ten-basket cases, Delaware $1.75 to $2, Niagara $1.50 to $1.75, Catawba $1.25, Salem and Concord $1 to $1.25. Trays, per ton, Delaware $90 to $100, white $45 to $50, black $35 to $40.

—Australia is agitated about the size of its national debt, which is now $1,180,000,000, or $304 per capita.

—It is estimated that on account of the drought, Australia exports for the ensuing year will be reduced by $25,000,000, and that it will be necessary to import $7,500,000 of foodstuffs.

—The export feature is the falling off in corn from 3,083,304 bushels in September, 1901, to 338,033 bushels, and for nine months from 94,470,710 to 6,985,338 bushels. As an instance, however, of the recovery at hand in grain exports, it may be noted that while for nine months exports of other grains than corn decreased thirty-four per cent., for September there is an actual increase of twelve per cent.

—The pneumatic tubes connecting the Boston postoffice with the North station were placed in commission Saturday after two years of idleness. The tubes connecting the postoffice with other sections of the city will not be installed until May 1.

—Bradstreet's reports exports wheat for week 5,997,620 bushels, against 7,060,137 bushels last week, and 6,672,888 last year; since July 1, 91,428,937 bushels, against 106,729,273 bushels last year Corn for the week 173,205 bushels, against 84,564 bushels last week, and 606,159 bushels last year; since July 1, 1,796,035 bushels, against 16,739,560 bushels last year.

—The receipts of wool in Boston since Jan. 1, 1902, have been 280,463,622 pounds, against 230,893,539 pounds same period in 1901. The Boston shipments to date are 235,579,718 pounds, against shipments of 214,663,665 pounds for the same period in 1901. The stock on hand in Boston Jan. 1, 1902, was 77,340,463 pounds; the total stock today is 122,224,367 pounds. The stock on hand Nov. 2, 1901, was 92,198,499 pounds.

—Col. A. A. Pope says the collapse of the American Bicycle Company was due to the failure to advertise its product. As president of the reorganized company, Colonel Pope proposes to be a large advertiser. When president of the Columbia Manufacturing Company he spent $500,000 in one year in advertising.

—London cable says that through passenger traffic from Paris to Pekin will begin early in the year 1904, and it is estimated that after that time twenty-eight thousand first-class passengers will travel over the route every year.

—The apple crop in Canada is reported as a large one, with fruit large, well formed and very free from worms, but there is more scab than there has been for years, and fruit inspector Lick says, "There are thousands of bushels of Greenings this year that it would have been better for all parties if they never had been picked." This was due largely to the wet season.

—Total receipts of coal at the port of Boston in October were 400,000 tons, compared with 392,000 tons in October, 1901. Nine-tenths of the receipts last month were bituminous.

—The total shipments of boots and shoes from Boston this week have been 96,544 cases, against 104,382 cases last week; corresponding period last year, 95,856. The total shipments thus far in 1902 have been 3,677,665 cases, against 4,066,328 cases in 1901.

—Exports of dairy products from New York last week included 714 boxes of cheese to Liverpool and 1116 boxes to Glasgow, a total of 1830 boxes.

—The visible supply of grain in the United States and Canada on Nov. 3 included 32,200,000 bushels of wheat, 2,584,000 bushels of corn, 7,515,000 bushels of oats. Compared with the week previous, this shows an increase of 2,282,000 bushels of wheat and 96,000 bushels of corn, with a decrease of 320,000 bushels of oats. One year ago the supply was 41,102,000 bushels of wheat, 12,900,000 bushels of corn and 8,099,000 bushels of oats.

—The egg market is slow and irregular. There is a full supply, but only a small proportion are really choice and fresh. Nearby and Cape fancy bring 30 to 32 cents and Eastern or Northern choice fresh 25 to 26 cents, but many are classed as fair to good at 20 to 23 cents. Western choice or selected nominally 23 to 24 cents, but for most of them 19 to 22 cents is a full rate. Refrigerator eggs sell slowly, at 20 cents for April packed and 18½ to 19½ cents for summer packed. Stock in storage stands at 150,671 cases, against 112,760 cases same time last year. The stock last week was reduced only 3051 cases, against 9320 cases same week last year.

—Pork provisions are firm: Short cut and heavy backs $24, long cut $25, medium $23.25, lean ends $27, bean pork $19 to $20.25, fresh ribs 13½ cents, corned and fresh shoulder 11½ cents, smoked shoulders 11¾ cents, lard 12½ cents, in pails 13 to 13½ cents, hams 13¾ to 14½ cents, skinned hams 14 cents, sausages 11½ cents, Frankfurt sausage 10½ cents, boiled hams 19 to 19½ cents, bacon 17 to 18 cents, bolognas 10 cents, pressed hams 13½ cents, raw leaf lard 13½ cents, rendered leaf lard 13 cents, in pails 14 to 14½ cents, pork tongues $25.50, loose salt pork 12½ cents, briskets 14½ cents, sausage meat 11½ cents, country dressed hogs 8¾ cents.

—Light cattle are easy, but choice heavy steers are scarce and wanted: Extra sides 11 cents, heavy 9 to 10½ cents, good 7½ to 8½ cents, light grass and cows 6 to 7 cents, extra hinds 13 to 14 cents, good 10 to 12 cents, light 6 to 6½ cents, extra fores 8 cents, heavy 7½ to 8½ cents, good 7 cents, light 6 to 6½ cents, backs 7 to 10 cents, rattles 4½ to 7 cents, chucks 5½ to 8 cents, short ribs 9 to 14 cents, rounds 7 to 9 cents, rumps 8 to 15 cents, rumps and loins 8 to 20 cents, loins 8 to 24 cents.

—Muttons and lambs are quiet but steady. Veals are steady. Spring lamb 6 to 8 cents, fancy 8 to 8½ cents, yearlings 5 to 6 cents, mutton 5 to 6 cents, choice 6½ to 7 cents, veals 7 to 10 cents, fancy and Brighton 10½ to 11 cents.

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What the commissioners don't know about coal mines will be hardly worth knowing.

Spiritualism awaits with interest the rappings of the last member of the Fox family.

If one must commit murder, it would seem as if a tombstone agent is as natural an object as any.

If the chrysanthemums get much bigger the Horticultural Society will have to build yet another new hall.

It is difficult to see anything over impulsive in the time taken by President Roosevelt to study his ballot.

Was there not a certain degree of emotionalism,—in fact, almost an object lesson,—in Dr. Brady's answer to President Eliot?

Now and then the wild animal still gets a chance to laugh at the fatal cases of mistaken identity on the part of its hunters.

Balzac, perhaps, could explain the state of mind of a young man of independent fortune who became a book agent for love of the business.

A large part of the population joins with the President and members of the Cabinet in their regret over the attitude of sensational journalism toward the King of Spain.

For oratorical purposes the contrast between Governor Taft's banquet and the rice famine in the Philippines is rather spoiled by the fact that rice is not an important item in state dinners.

Vigoro, the name of the newest game in merry England, looks a good deal like a patent medicine or a new cereal; in practice, however, the game is apparently a cross between lawn tennis and cricket.

Who was the Boston laureate who wrote those beautiful lines recently quoted in the Sun:

As you travel to and fro, you may look at H O,
But never, never touch it. O, no, no, no.

Boston has a new cooking school; yet we seem as far as ever from the time when the anxious wife of the plain man can be taught a few helpful hints toward palatably preparing the plain man's plain dinner.

There is a difference of opinions as to the reasons that have separated Mr. and Mrs. Booth-Clibborn from Dowieism, but the army explanation has the advantage of wider respect among the general public.

Another daughter of the States suing for divorce from her titled husband! Even the optimist finds it difficult to believe that the percentage of blanks is not disproportionately large in this division of the great lottery.

Rockland continues to be famous. A short time ago it was visited by Miss Mary McLane, and now it has been the scene of spirited combat between rival swains over the charms of a seventeen-year-old waiter girl.

"Critics," said Mr. Sydney Grundy in London the other day, "exist only for themselves and their papers, and ought, therefore, to be better paid." Even in Boston critics will agree that the latter part of the statement is impeccable.

That imperialism is not all beer and skittles is rather evident in the rumored discontent among the younger officers in the army. The excitement of war is one thing, and the monotony of living in barracks after it is over is quite another.

"Nothing on earth," says a Boston critic, who has certainly had plenty of opportunity to form an opinion, "will induce a Bostonian to go to any opera he has not been to before—unless he is too young to know better and is taken by his parents."

It would be more than interesting if modern science should compel Father Tiber to give back to moderns the gifts bestowed upon him by the ancients. And little enough sympathy would he get from the host of men whose youth was marred by compulsory declaiming of Horatius.

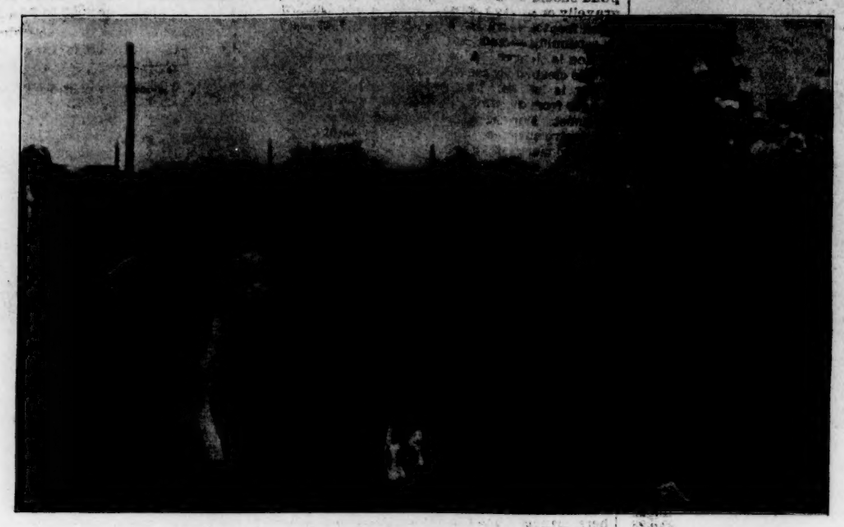
The pleasant little anecdote now going the rounds and telling how the late John W. Mackay once ordered a single orchestra stall for his friend Florence's benefit performance, and later paid for it with a $1000 check, shows not only unostentatious kindness, but also some little experience in choosing the best place from which to see a play.

The Lewiston Journal agrees with Mr. Stanwood, Bowdoin, '61, that the class prophecy is vulgar, crude and boorish—prophecy is "as gloomy a quarter of an hour as there is between birth and death." The picture is not one to encourage a mad rush for seats at Bowdoin commencement exercises.

When one dissects Mr. Elbert Hubbard's statement that he trusts the key of the Roycroft establishment to an ex-convict, in whom he has perfect confidence, one finds that the statement means no more than many others that have emanated from East Aurora. Who wouldn't trust an ex-convict, or any one else, for that matter, in whom he had perfect confidence?

Mr. Corey of Braddock, Pa., is the latest contributor to the gaiety of the nations. The gentleman doesn't approve of progressive euchre—whether this is mere conservatism is not stated—at church socials; furthermore, having been invited to such a function, he has indignantly declined through the columns of a daily paper; finally he has attempted to guard against any further invitations by requesting the Pope to issue a ball.

Somebody made a curious error in selling the property of Annie Clarke at auction



EMILY'S DAUGHTER.
See First Page Illustration.

without giving Boston an invitation to be present. Those who attended the sale at Needham had little feeling for theatrical souvenirs, and a serviceable waste-paper basket brought a larger price than the manuscript copy of the epilogue spoken at the close of "Peg Woffington" when Miss Clarke left the Museum.

A contemporary, referring to the troubles of the Italian Opera Company, speaks of the members as "stranded in a new country." The statement admits of two explanations. Either the opera company in question is well used to being stranded, or else one of the English-speaking members has tided over his own personal distress by turning reporter.

Fall Plowing.

Owing to the light fall rains but little has been done toward fall plowing, as the soil has been so dry that it made plowing hard for the teams to turn the sod, especially in the breaking of sod land. But of late we have had rains, so that even late in the season much can yet be done in this direction before the ground freezes up.

On some soils we think that fall plowing is highly beneficial. Such soil as the stiff clay and the hard gravelly soil, which is hard to plow of a sufficient depth for the roots of the plants to penetrate and flourish as they should, fall plowing we have found, after a life upon the farm for the past twenty-five years, highly beneficial.

The freezing and thawing serves to pulverize the soil, and by practicing this method for a series of years we can render such soil much finer, and also serves to deepen the soil yearly, as the frost penetrates each season deeper and deeper, so we are able to run the plow deeper each year, and thus make an improvement in the top soil, and this is just what this hard and stiff soil actually needs to make it suitable for the growing crops. No crop can make a successful showing on such a hard soil even when dressed very highly.

If our farmers who have such soil to work would keep this question in view, the gradual deepening of the soil, much improvement would be reached. No matter if we keep the land under the plow for three or four seasons before seeding to grass, as this method of treatment will certainly pay, only give it a fair dressing while cropping.

We once had a low field, which was partially a stiff clay, with an occasional patch of mucky soil to treat, and I was intending to get it into good grass as soon as I could, as it only bore a cheap quality of hay, being somewhat swaley, so I tried the late fall treatment of plowing, and the help of elements, the freezing and thawing process for a series of four seasons, and then sowed to grass, and the thorough deepening made it one of the best hay fields upon the farm; good, clean timothy hay took the place of the cheap hay, which it produced before treatment, and all this with fair dressing for two seasons before seeding down to grass.

Quality in Beef.

The Kansas Experiment Station, in a bulletin issued last May, reports the results of feeding six steers selected for that purpose in the Kansas City stock yards. As they were to be used as a method of instructing the students there, they were purposely different in character. The man who selected them thus described them: The Shorthorn grade is just fair, but indicates quality; the Angus grade is nearly typical and has big flesh; the Jersey is rather extra; the Holstein is somewhat light-fleshed, partaking more of the dairy than the beef element; the red scrub is light-fleshed and coarse—is red, but not a Shorthorn; the spotted scrub shows more Shorthorn of a common family, and has a characterless head. Both scrubs are about the stamp an unsophisticated breeder breeds for and feeds at. They have plenty of daylight under them, are wofully light in the thigh and are without indications of twist.

They were put on feed Aug. 28, and were fed until March 21, a period of 205 days. The feed was corn, corn chop and alfalfa hay. The Shorthorn weighed 1041 pounds at the beginning and gained 395 pounds. The Angus weighed 882 pounds and gained 288 pounds. The Jersey weighed 862 pounds and gained 348 pounds. The Holstein weighed 886 pounds and gained 411 pounds. The red scrub weighed 1052 pounds and gained 435 pounds, and the spotted scrub weighed 1064 pounds and gained 306 pounds; average gain 364 pounds. The Angus was in good condition when the feeding began, and the others were thin.

The Shorthorn required 978 pounds of corn and 546 pounds of hay for each one hundred pounds of gain. The Angus 1138 pounds of corn and 504 pounds of hay, the Jersey 936 pounds of corn and 598 pounds of hay. The Holstein 816 pounds of corn and 508 pounds of hay. The red scrub 770 pounds of corn and 491 pounds of hay and the spotted scrub 1043 pounds of corn and 692 pounds of hay, an average of 947 pounds of corn and 557 pounds of hay. The Holstein and red scrub were the only ones that required less than the average of both grain and hay.

When fattened the Shorthorn weighed 1436 pounds alive, and of the dressed weight 912 was meat, 73 pounds was tallow and 86 pounds hide. The Angus weighed 1170 pounds, of which 735 was meat, 49½ tallow, 50½ hide. The Jersey weighed 1210 pounds, of which 720 was meat, 92½ tallow, 85 hide. The Holstein weighed 1297 pounds, of which 774 was meat, 58½ tallow and 87½ hide. The red scrub weighed 1487 pounds, of which 819 pounds was meat, 60 tallow and 95½ hide. The spotted scrub weighed 1370 pounds, of which 818 was meat, 71½ was tallow and 93½ was hide.

Taking it by percentages, the Shorthorn had 63.5 of dressed meat, five per cent. tallow and six per cent. of hide of the live weight. The Angus had 62.6 per cent. dressed beef, 4.2 per cent. tallow and 6.9 per cent. hide. The Jersey had 59.5 per cent. of dressed beef, 7.6 per cent. tallow, seven per cent. hide; the Holstein 59.6 per cent. dressed meat, 4.5 per cent. tallow, 6.7 per cent. hide; the red scrub 59.8 per cent. dressed beef, four per cent. tallow, 6.4 per cent. hide; the spotted scrub 59.7 per cent. dressed meat, 5.2 per cent. tallow and 6.1 per cent. hide.

Prices quoted by Swift & Co., Kansas City, on April 23, were loin twenty cents a pound, rib nineteen cents, round eleven cents, rump eleven cents, chuck nine cents, plate seven cents, flank seven cents, neck five cents and shank 3½ cents. The Shorthorn and Angus or beef breeds averaged 27.8 per cent. of the two higher-priced cuts. The Jersey and Holstein or dairy breeds averaged 27.5 per cent. best cuts and the two scrubs 26.7 per cent. best cuts.

An extensive feeder and shipper estimated the market value of the steers when finished at 8½ cents a pound for the Shorthorn, 7½ cents for Angus, eight cents for Jersey, 7½ cents for Holstein, 7½ cents for red scrub and seven cents for spotted scrub. The wholesale value of the meat was less than the value as estimated when alive by $14.38 on Shorthorn, $18 on Angus, $15 on Jersey, $11.35 on Holstein, $18.75 on red scrub and $21.52 on spotted scrub.

The steers were fed corn and corn chop which cost the station an average of $1.30 per 100 pounds, and alfalfa hay which cost $10 per ton. The loss in fattening, adding cost of feed to the first cost of steers and their value when fattened deducted, was $7.35 on Shorthorn, $7.30 on Angus, $5.39 on Jersey, $11.86 on Holstein, $3.54 on red scrub and $8.92 on spotted scrub, an average loss of $7.39.

The prices at which the steers were valued when ready for the market were high, but the unusual high cost of feed cause a loss in feeding every steer. These statements show plainly why the man who buys meat for his table has to pay high prices when feed costs so much.

Fortunately for the station, we had hogs following the steers to pick up the droppings. For reasons not connected with this test it was necessary to change the hogs frequently and vary the number, so that no accurate account could be kept of the gain of the hogs. We greatly regret this. Work in previous feedings shows two hundred pounds of pork per steer from seven months feeding, and it is probable that more pork was made in this feeding. The hogs, therefore, covered the loss on the steers and left a balance for labor and profit.

The cost of feed for each one hundred pounds of gain was as follows: Shorthorn, $15.41; Angus, $17.31; Jersey, $15.16; Holstein, $15.16; red scrub, $14.15; spotted scrub, $17.02. Average, $15.70.

The dressed carcasses of the steers were used in a class demonstration on quality of beef given to our college classes in judging beef cattle. Mr. John Gosling of Kansas City, an expert judge of beef cattle and of beef, gave the lecture, and Mr. Charles Anthony, head cutter for A. Weber, the largest retailer of meat in Kansas City, cut up the carcasses before the class as Mr. Gosling lectured. Extracts from Mr. Gosling's lecture follow, as they explain the differences in the character of the meat from the different steers.

Mr. Gosling said: The dairy-bred steers have done better than I expected they would. An animal that yields thirty to thirty-two per cent. of high-priced cuts, ribs and loins, trimmed and uniformly gauged for acceptance by the hotel trade, is something extreme.

We find that the Jersey contributes 27.9 per cent. of this commodity, with a fine-grained, ripe carcass throughout. He was in good condition when bought, and about three years old.

The Holstein also did well, much on account of being lighter fleshed than the general run of his breed. Heavier flesh in this breed of cattle means coarser quality of lean; light flesh means fat flesh. From the Holstein carcass we get 27.6 per cent. of loin and rib, which is also creditable. I think that this Holstein steer was several months younger than the Jersey.

In the display of carcasses we have two representatives of common beef cattle, designated as the red scrub and the spotted scrub.

The red scrub, which always looked a little better from a feeder's standpoint, I find in the statistics made the largest gross gain in weight of the six steers. One explanation of this is his age, which must have been close to four years when put on feed. A comparatively mature steer, weighing 1050 to 1100 pounds, has but little fat to make, and will gain faster than a young steer that has everything to make. The red scrub yields 25.6 per cent. of high-priced cuts, although he shows the largest gain. The spotted steer with a trace of Shorthorn blood gives 27.3 per cent. of high-priced cuts.

The Shorthorn grade shows the largest proportion of high-priced cuts, 28.1 per cent., and the Angus 27.5 per cent. He was the youngest of the six steers, which will account for some of his shortcomings. The rib roasts of these two steers were contrasted. The Shorthorn has an admixture of fat with ample spine fat covering. Some buyers would consider it a little wasty. The Angus was not fat enough for the best markets, but was the very thing for those who think the Shorthorn cuts are wasty. The Shorthorn was probably eight months older than the Angus, and therefore riper.

Neither the Jersey nor Holstein show much flesh above the shoulder blade. The Holstein is the poorer covered of the two. The color of the lean meat is better in the Holstein, but the Jersey has the most back or basting fat. The fullness of flesh throughout the back is remarkable for dairy-bred cattle. The red scrub has better beef than the other, in the color of the lean, the uniformity and amount of back fat, and the covering or basting fat are more ample than in the spotted scrub, and indicate tender beef. When lean meat is of a dark red shade it is not as tender as when paler, and beef is better when the fat is nearer white, instead of a yellow cast. The Angus steer should have had oil meal or cottonseed meal added to his rations, or a longer time in fattening.

World's Coal Consumption.

The coal production and consumption of the world, and especially of the United States in comparison with other coal-producing countries, is the subject of a monograph to appear in the forthcoming issue of the Treasury Statistical Bureau's "Summary of Commerce and Finance." The general demand for coal seems to have increased rapidly in recent years, not alone in the United States, but throughout the world. One of the characteristic features of modern industry development has been the rise of the coal industry. Modern society depends on coal as the fuel and source of power, and the terms "iron age," "machine age" and 'age of steam" may all be translated the "age of coal."

The rapidity with which the production of coal has increased may be appreciated when the present volume of that production is considered, and when we reflect in how recent a time the production formed only a small fraction of that quantity. In 1901 the total coal production of the world was 866,165,000 short tons. Until as late a period as 1883 the world's production had never been half so great, being only 450,990,000 metric tons in that year, and not until 1872 had the world's production been as much as a third as large as it is at present. By 1864 the world's production was only 174,000,000 metric tons, or less than twenty-three per cent. of the production of 1901. The statistics of the world's production for still earlier periods cannot be determined with any pretense of accuracy, but, on the basis of the British statistics from 1854 and of estimates for earlier periods, and from such statistics as are obtainable from France, Germany, Belgium and Austria-Hungary, an approximation may be made of the actual production. In 1860 the world's production of coal was about 144,000,000 metric tons, or less than one-fifth of the production of 1901, and considerably less than the production of either the United States or the United Kingdom at present. Ten years earlier the world's production amounted to only about eighty-three million metric tons, about one-tenth of the present world's production, and considerably less than the present output of the single State of Pennsylvania. In 1840 the production was much smaller still, amounting to little over forty-five million metric tons, or about one-seventeenth of the present output, while during the three-quarters of a century since 1820, when the output was about seventeen million tons, the production has increased about 4500 per cent.

While the figures of the world's production prior to 1864 are necessarily defective, owing to the absence of accurate statistics for the English and American industry, they sufficiently indicate the immense development of the industry during the last century. The significance of this development cannot be overlooked.

The production of coal is chiefly in the hands of the three nations, the British, the American and the German. During the last thirty years, and even earlier, the combined coal output of the United States, the United Kingdom and Germany has averaged year for year, about five-sixths of the coal output of the world. Possessing only a tenth of the world's population, they have produced about eighty-three per cent. of the mineral fuel, while the remaining ninety per cent. of the world's inhabitants have produced only about seventeen per cent. of the coal, and even if the savage and semi-barbarous nations be disregarded, the immense preponderance of coal production in these countries must be conceded. To this group might be added Belgium, which produces and consumes more coal per capita than any other European country except the United Kingdom, but for the fact of its small population placing it in the second rank of coal-producing countries.

While the continued output of these three countries has kept pace with the production of the rest of the world, their relative position has been materially altered. In 1868 the United Kingdom produced over three times as much as either the United States or Germany, the output of these countries being approximately fifty-two, 14½ and 16½ per cent. of the world's production, respectively. In 1870 the proportion was about the same, although the United States had gained upon Germany as a coal producer. By 1875 the output of the United Kingdom was still considerably greater than the combined production of the United States and Germany, the output of these three countries being forty-five, twenty and eighteen per cent. of the world's production, respectively. The next half-decennial period witnessed a remarkable increase in the American production and a corresponding relative decrease in that of Great Britain, the proportions of these countries being thirty-six, twenty-eight and seventeen per cent., respectively. This increase was maintained during the latter part of the past century, and in 1896 the output of Great Britain and Ireland was only thirty-four per cent., that of the United States already thirty per cent., and that of Germany 19.2 per cent. of the coal production of the world.

In 1899, for the first time, the coal production of the United States exceeded in quantity that of Great Britain. This superiority has been maintained for two successive years. During 1901 the United States production was greater than the amount of coal produced in Great Britain and all her colonies. During that year the shares of the leading coal-producing countries were as follows: United States, thirty-four per cent.; United Kingdom, twenty-eight per cent., and Germany, 19.2 per cent. Nor is there any prospect that the leading position of the United States may be lost in favor of another country within any calculable future time.

Notes from Washington, D. C.

Mountain water makes the plains smile. The train thunders down the canyon of the Arkansas in the Colorado Rockies, skirting along the edge of the angry stream of muddy, swift-flowing water. The Royal Gorge, not far from where the river debauches onto the plain, is one of the wonders of nature. The sides are precipitate, hundreds of feet straight up of gray and reddish rock, with not a foothold for even mountain goats. The sun strikes the yellow water of the river only at midday; it is no more than a good leap across it, and during countless centuries of turbulent flow the stream has cut for itself a crack through the mountain. Yet despite the sheer cliffs and the rainless clime, wherever a crevice or a tiny ledge allows the lodgment of particles of disintegrated and decomposing rock, there the plants of the arid region find a foothold—stiff grasses, prickly woody forms and tiny stunted evergreens. How different the scene just beyond the mouth of the canyon out on the plain. The Arkansas still wends his muddy course, but in less flow, for much of his water is diverted to nourish fields of fodder and orchards, and cantaloupes and beets and yellow pumpkins even. The apple trees this year are laden to the breaking point,—as I believe they are every year under irrigation,—fat cattle feed on green alfalfa or fields show covered with cocks of the hay cured a bright light green. This is the third cut this year—a total crop of probably five tons to the acre.

It is a curious thing how the streams of arid lands are always muddy, while those of a humid region are normally clear. The source of the arid land streams is on the mountains. The melting snows or the mountain rains rush along over the dry slopes of rocks and loose dirt, and sweep it down into the bed of the stream silt or sediment, worth to the irrigator a large annual fertilizer bill. But will not this stock of rich washoff give out some day, and thus compel the irrigator to fertilize? No. The source is inexhaustible, so long as the forces of nature continue their work. The great, rich alluvial bottom lands are but the washing down of mountains, bit by bit, and this will go on as long as the mountains last, and we have freezing and thawing and sunshine. For ages the Nile has brought down silt from the Abyssinian Mountains and fertilizes her broad cultivatable plains, and the land is as rich as ever. The Colorado river has cut out billions of tons of the mountains and spread them away over its lower flood areas—land wonderfully rich.

Where they can in the West stock farmers turn their stock out to range during part of the year. Some of the great herds are brought through exclusively on the range, but the practice is growing of supplementing this with alfalfa and other feed. But an Eastern farmer would think he was killing cattle to turn them out on the dry range and expect them to shift for themselves. The range is pretty poor looking and no mistake, but, like many other things in the West, its appearance is deceptive. The grass is short and close and makes picking, but it is sweet and nutritious, and as there is no rain to amount to anything, it cures itself as grass does not in the East.

But the public range is becoming badly overcrowded; fights are continual between sheep and cattlemen, the grasses are allowed no opportunity to recuperate, and their meat-producing power is becoming less and less. Some wise system of leasing which will not interfere with settlement will have to be worked out which will enable a man to improve his share of the range. When this is done, vast additional flocks and herds can be raised and fattened to supply the Eastern markets.

I heard a story last week on the size to which the sugar beets of the arid region attain. The Rocky Ford farmers have raised beets weighing seven or eight pounds each and running seventeen per cent. sugar which is remarkably fine, and some of the Utah beets weigh ten pounds each; but in a California town they found two policemen asleep on one beet at the same time.

—A coal-fieldon the Black sea, 140 miles from Constantinople, is being worked vigorously, but the poor quality of the coal mined will prevent its coming into competition with the American article.

The Markets.

BOSTON LIVE STOCK MARKETS.

ARRIVALS OF LIVE STOCK AT WATERTOWN AND BRIGHTON.

For the week ending Nov. 12, 1902.

	Cattle	Sheep	Shotes and Suckers	Fat Hogs	Veals
This week	4079	13,086	125	29,911	1701
Last week	2698	12,452	50	24,838	1982
One year ago	5142	15,088	92	26,612	1869

Prices on Northern Cattle.

BEEF—Per hundred pounds on total weight of hide, tallow and meat, extra, $6.75@7.50; first quality, $5.50@6.00; second quality, $4.50@5.00; third quality, $4.00@4.25; a few choice single pairs, $9.50@10.00; some of the poorest bulls, etc., $3.00@3.50. Western steers, 4½@7⅞c.

MILCH COWS—Fair quality $30.00@48.00; choice cows $50.00@68.00.

STORES—Thin young cattle for farmers: Yearlings, $15@25; two-year-olds, $18@32; three-year-olds, $28@48.

SHEEP—Per pound, live weight, 2½@3c; extra, 3½@4½c; sheep and lambs per head in lots, $2.50@5; lambs, $3.50@5.50.

FAT HOGS—Per pound, Western, 6½@6⅞c, live weight; shotes, wholesale ——; retail, $2.25@8.00; country dressed hogs, 7½@8½c.

VEAL CALVES—4@7c ₱ lb.

HIDES—Brighton—7@7½c ₱ lb; country lots, 6½@7c.

CALF SKINS—60c@$1.50; dairy skins, 40@60c.

TALLOW—Brighton, 4@5c ₱ lb; country lots, 2½@3c.

PELTS—40@85c.

	Cattle.	Sheep.
Maine.		
At Brighton.		
M D Holt & Son	14	
Harris & Fellows	39	275
Thompson & Hanson	18	90
Geo Lowell	15	100
H M Lowe	8	200
Libby Bros	15	
B C Waite	7	
J M Philbrook	40	
P A Berry	20	
New Hampshire.		
At Brighton.		
J H Foss	7	3
A C Foss	38	10
At N E D M & Wool Co.		
A F Jones & Co	64	90
Balance on late train	35	50
At Watertown.		
D B O'Brien	85	
W F Wallace	81	19
Vermont.		
At Watertown.		
A Williamson	16	
Fred Savage	6	70
N H Woodward	3	3
B F Combs	145	
B P Fields	20	
W G Townsend		50
A P Needham	13	44
R E French	20	
At N E D M & Wool Co.		
On late train	163	675
Roder & Keene	20	

	Cattle.	Sheep.
At Brighton.		
J S Henry	11	48
Canada.		
At Watertown.		
Gordon & Ironsides	1617	1717
At N E D M & Wool Co.		
N E D M & Wool Co.		6750
Massachusetts.		
At Watertown.		
J S Henry	30	
W A Bardwell	15	15
O H Forbush	9	
W F Dennen	3	
At Brighton.		
J S Henry	81	
H A Gilmore	11	
Scattering	100	
R Connors	17	
F E Keegan	5	
C D Lewis	6	
J P Day	40	
D A Walker	4	
Western.		
At Brighton.		
J J Kelley	107	
Sturtevant & Haley	175	
Swift & Co.	288	
Morris Beef Co	128	
At N E D M & Wool Co.		
N E D M & Wool Co	288	2700
At Watertown.		
J A Hathaway	370	

Live Stock Exports.

Canadian shipments have swelled the grand total of the week to considerable extent, as arrivals of late have been light at Liverpool and London. Cable dispatches give a better range in price on cattle; common to fair 1½c (d. w.) higher, the range being 12½@14c, d. w. Rates of freight on cattle across, 32 s. 6 d. ₱ head. Shipments of the week, 2827 cattle, 1717 sheep and 12 horses.

Shipments and destinations—On steamer Cestrian, for Liverpool, 298 cattle by Swift & Co., 260 do. by Morris Beef Company, 150 do. by J. A. Hathaway, 12 horses by E. Snow; on steamer Anglian, for London, 250 cattle by Morris Beef Company, 252 do. by Swift & Co.; on steamer Michigan, for Liverpool, 724 Canada cattle, 1119 sheep, also from Canada, by Gordon & Ironsides; on steamer Ultonia, for Liverpool, 543 Canada cattle by Gordon & Ironsides; on steamer Norwegian, for Glasgow, 350 Canada cattle and 598 Canada sheep by Gordon & Ironsides.

Horse Business.

The trade during the past week was not up to the average, as the attention of the buyers was taken up with the election to the neglect of the regular trade. Dealers are looking forward to a good coming week. Western horses numbered 500 head. At Moses Colman & Son's sale stable had a good average sale, selling over 75 head of acclimated horses of various qualities from $40@194, average price $125; sold for drive and general business. At Isburgh & Co.'s sale stable some good sales were made in family horses and for light business. The bidding was not especially spirited, but worked off quite a number of horses between $100 and $200, also at lower prices. At Cavanaugh Bros. light sales of the week in heavy horses at $125@225.

Union Yards, Watertown.

Tuesday—Not a heavy supply of beef cattle, but a good run of store cows, mostly milkers. The movement in beef cattle where good cattle were concerned sold at fair prices, but the market was over run with slim cattle, desirable only for canning purposes, that sold for less than 2c. O. H. Forbush sold 1070-lb cows at 3c; 920-lb of better quality at 3¼c. B. P. Fields, an old-time drover, had in 20 head of cattle, all but 1 for beef. N. H. Woodward sold cheap cows at 1½c. J. A. Hathaway sold 40 Western steers, of 1500 lbs, at 7c; 25 do., of 1450 lbs, at 6½c; 25 do., of 1400 lbs, at 6c, down to 5c.

Milch Cows.

In moderate demand, except to speculators. Prices rule steady.

Fat Hogs.

Off in price, ⅛@¼c. Western at 6⅛@6⅞c, l. w. Local lots, 7⅞@8⅞c, d w.

Sheep Houses.

Supply of the week quite heavy from the West and Canada, but largely from Canada, being near 8500 head, of which 1717 head were for export. Market prices on sheep without improvement, and lambs rule ¼c lower on best grades. A few lots of sheep and lambs from New England, but owners are holding them back until later in the season. J. S. Henry sold at 4½c. D. B. O'Brien sold 85 sheep and lambs in Canada.

Veal Calves.

Weak prices were the features of the market. Veal market off in the city, and butchers were paying ¼c easier prices except for the very best. W. F. Wallace, 60 calves, mixed in quality, at 6¼c. N. H. Woodward sold 125-lb calves at 6½c, choice calves at 7c.

Live Poultry.

Market prices, 9½@10½c by the crates for mixed lots. Pullets, 50@60c.

Droves of Veal Calves.

Maine—M. D. Holt & Son, 25; Harris & Fellows, 75; Thompson & Hanson, 60; George Lowell, 35; H. M. Lowe, 40; Libby Bros., 40; J. M. Philbrook, 7; P. A. Berry, 15.

New Hampshire—J. H. Foss, 4; A. F. Jones & Co., 141; balance on late train, 40; W. F. Wallace, [illegible]

Vermont—A. Williamson, 50; Fred Savage, 75; [illegible] N. Jenne, 2; N. H. Woodward, 10; W. E. Hayden, 21; A. P. Needham, 15; R. D. French, 2; on late train, 435; J. S. Henry, 45.

Massachusetts—J. S. Henry, 155; W. A. Bardwell, 23; O. H. Forbush, 3; W. F. Dennen, 2; H. A. Gilmore, 32; scattering, 150; R. Connors, 4; F. E. Keegan, 4; C. D. Lewis, 4; J. P. Day, 4; D. A. Walker, 10.

Brighton, Tuesday and Wednesday.

Stock at yards: 1161 cattle, 818 sheep, 25,348 hogs, 640 calves, 150 horses. Maine, 143 cattle, [illegible] sheep, 115 hogs, 324 calves. New Hampshire, [illegible] cattle, 13 sheep, 5 hogs, 4 calves. Vermont, 11 cattle, 48 sheep, 2 hogs, 45 calves. Massachusetts, [illegible] cattle, 226 hogs, 267 calves.

Tuesday—The arrival of beef cattle were not heavy and a large supply not required this week. Prices continue weak on the lower grades, as a large number of the New England cattle seem to run into that sort of stock at the present time. Very slim cows and heifers seem to abound this week, and for such the demand is limited. Good cattle rule steady. H. A. Gilmore sold 4 cows at [illegible]c, l. w. A. C. Foss sold cows at 3½c and 2½c, l. w. G. W. Lowell sold 8 slim cattle, of 650 lbs, at 2½c.

Milch Cows.

The early trade was to some extent in choice new milch cows selling in a speculative way by the head. Most of these cows sold at above $40 a head. The market is in fair shape, but more especially for the better class on sale. Libby Bros. sold on commission 4 choice cows at $50@$60; 5 cows at $40@42. J. S. Henry sold 3 choice cows, $50 each; 4 cows, $40; 2 at $45. George Lowell, 1 very choice cow, $65. J. M. Philbrook, 1 choice cow, $50.

Veal Calves.

Easier rates on anything excepting the best grades. Butchers bought with considerable caution. F. E. Keegan sold 4 slim calves, so much a head, being light in weight. George Lowell sold 40 calves, 115 lbs, at 6¼c. M. D. Holt & Son sold 25 calves on commission; sales of a few choice calves at 7c.

Late Arrivals.

Wednesday—A better feeling at the yards in milch cows. There were more buyers present and more activity noticed. Prices were fairly firm for good grades. A quiet beef-cattle trade on such as offered, being mostly slimish beef cows. J. T. Molloy sold 2 cows (choice) at $50 each, down to $30. Libby Bros. sold on commission 3 choice at $55 each; 1 at $50; 5 cows at $40@42; 2 at $30 each. J. S. Henry sold milch cows within the range, $57.50 down to $35. A. C. Foss, 9 steers, of 1100 lbs, at 4c. J. H. Fox, 1 cow and heifer, 800 lbs, at 3c. W. Cullen, 25 choice cows, $60 each; 1 at $85; 2 at $55; 2 at $60 each. W. Scollans, 3 cows, $50 each; 2 at $47.50; 2 at $42.50 each.

Store Pigs.

Light demand, no change. Small pigs, $2.50@3.50. Shotes, $5@8.

BOSTON PRODUCE MARKET.

Wholesale Prices.

Poultry, Fresh Killed.

Northern and Eastern—	
Chickens, choice roasting	16@18
Chickens, fair to good	12@15
Chickens, broilers, 2 lbs each, ₱ lb	17@18
Green ducks	15@17
Green geese	15@17
Fowls, extra choice	14@
" fair to good	12@13
Pigeons, tame, choice, ₱ doz	1 50@
" com to good, ₱ doz	75@1 25
Squabs, ₱ doz	2 00@2 50
Western iced or frozen—	
Turkeys, com. to good	10@12
" fancy spring	13@14
Broilers, good to choice	14@15
Chickens, common to choice	10@13
Fowls, good to choice	12½@13
Old Cocks	9@

Live Poultry.

Fowls ₱ lb	9½@10½
Roosters ₱ lb	7@8
Broilers ₱ lb	9½@10½

Butter.

NOTE—Assorted sizes quoted below include 20, 30, 50 lb. tubs only.

Creamery, extra—	
Vt. & N. H. assorted sizes	24@24½
Northern N. Y., assorted sizes	24@24½
Northern N. Y., large tubs	24@
Western, large ash tubs	24@
Western, asst. spruce tubs	24@24½
Creamery, northern firsts	22@23
Creamery, western firsts	22@23
Creamery, seconds	20@21
Creamery, eastern	20@23
Dairy, Vt., extra	22@
Dairy, N. Y., extra	21@
Dairy, N. Y. and Vt. firsts	19@20
Renovated	20@
Boxes—	
Extra northern creamery	24½@
Extra dairy	22@23
Common to good	19@21
Trunk butter in ½ or ¼-lb prints—	
Extra northern creamery	24½@
Extra northern dairy	23@
Common to good	19@21

Cheese.

Vt. twins, new extra ₱ lb	12½@12½
" firsts ₱ lb	11@12
" seconds ₱ lb	8@10
Sage cheese, ₱ lb	12½@13
New York twins new extra	12½@
" " " " firsts	11@12
" " " " seconds	8@10
Ohio flats	10½@11½

Eggs.

Nearby and Cape fancy, ₱ doz	32@34
Eastern choice fresh	25@26
Eastern fair to good	20@23
Michigan fancy candled	24@
Vt. and N. H. choice fresh	25@26
Western fair to good	20@22
Western selected, fresh	22@23½
Western dirties	15@17
Refrigerator—April	20@
" Summer	18½@19½

Potatoes.

Hebron, ₱ bu	63@65
New York, round white	65@
Western, " "	60@63
Aroostook Green Mountains	70@73
Sweet potatoes, yellow—Southern	1 50@
Jersey double head	2 00@2 50

Green Vegetables.

Beets, ₱ bu	50@60
Cabbage, native, ₱ bbl	75@1 00
Carrots, ₱ box	50@60
Parsnips, ₱ bu	75@1 00
Lettuce, ₱ 3 doz	1 25@1 50
Celery, white, ₱ doz	65@90
" Boston market	1 25@1 50
Cucumbers, hothouse, each	7@8
Onions, Natives, ₱ bbl	2 50@2 75
" W. Mass. ₱ bbl	1 50@1 75
" Spanish ₱ bu	1 00@1 25
Peppers, ₱ bu	2 50@2 75
Egg plant, ₱ case	2 00@2 25
Parsley, ₱ bu	60@75
Radishes, ₱ box	65@75
Squash, ₱ crate	1 50@1 75
" Marrow, ₱ ton	10 00@12 00
" Turban	1 50@1 75
" Hubbard, ₱ ton	12 00@20 00
String beans, so., ₱ ½-bbl. bskt	2 25@2 50
Wax beans, ₱ box	2 25@2 50
Sieva beans, ₱ box	2 25@
Spinach, native, ₱ box	30@40
Turnips, flat, ₱ box	40@50
Turnips, yellow, ₱ bbl	1 00@1 25
Tomatoes, hothouse, ₱ box	25@30
Cauliflower, 8 in a box	1 00@1 25

Domestic Green Fruit.

Apples, Twenty-Ounce, ₱ bbl	1 25@2 00
" common, green, ₱ bbl	75@1 25
" Snow and Wealthy	2 00@3 00
" Maine Harvey	1 75@2 00
" Pound Sweets	1 50@2 00
" Hubbardston ₱ bbl., No. 1	1 25@2 00
" Greenings	1 25@2 00
" King, ₱ bbl	2 50@3 00
" Pippins and Porters	1 00@1 50
" Geneting and Colverts	1 25@1 50
Pears, Anjou, ₱ bu	1 00@2 00
" Clairgeau, ₱ bu	1 00@2 00
" Bosc	3 00@3 50
" Sheldon	1 00@2 00
Quinces, ₱ bu	1 75@2 25
" " bbl	4 00@4 50
Grapes, ₱ pony basket—	
Vergennes, western N. Y	15@17
Catawba, western N. Y	13@15
Salem, western N. Y	13@15
Concord, western N. Y	10@13
Niagara, western N. Y	15@20
Isabella, western N. Y	10@
Concord, western N. Y., 8-lb bskt	18@20

Hides and Pelts.

Steers and cows, all weights	6½@7
Bulls	6½@7
Hides, south, light green salted	8@8½
" " dry flint	13½@14½
" " " salted	9@10½
" buff, in west	8@9½
" " salted ₱ lb	8@9½
Calfskins, 5 to 12 lbs each	90@1 60
" over weights, each	1 80@2 10
Deacon and dairy skins	50@60
Lambskins each, country	35@50
Country Pelts, each	40@85

Dried Apples.

Evaporated, choice	6@7½
Evaporated, prime	6½@6½
Sun-dried, as to quality	3@4½

Grass Seeds.

Timothy, ₱ bu., Western, choice	2 55@
" prime	2 10@2 25
Clover, ₱ lb	13@13½
Red Top, Western, ₱ 50 lb sack	3 00@3 50
" fancy recleaned, ₱ lb	9½@11½

Beans.

Pea screened	2 20@2 40
Pea seconds	2 00@2 10
Pea foreign	2 25@2 40
Mediums, choice hand-picked	2 45@
Mediums, screened	2 20@2 40
Mediums, foreign	2 25@2 40
Yellow eyes, extra	2 90@3 00
Yellow eyes, seconds	2 60@2 80
Red Kidney	3 10@3 30
Lima beans dried, ₱ lb	8@

Hay and Straw.

Hay, No. 1, ₱ ton	17 00@17 50
" " 2 "	14 00@16 00
" " 3 "	12 00@14 00
" fine choice	12 00@13 00
" clover mixed ₱ ton	12 00@13 00
" clover, ₱ ton	12 00@12 50
" swale, ₱ ton	9 00@10 00
Straw, prime rye	12 50@14 00
Straw, oat, per ton	8 50@9 50
Straw, tangled rye	10 00@11 00

FLOUR AND GRAIN.

Flour.—The market quoted quiet. Spring patents, $4 15.
Spring, clear and straight, $3 60@3 80.
Winter patents, $3 85@4 50.
Winter, clear and straight, $3 50@3 90.

Corn Meal.—The market is quiet at [illegible]@1 35 ₱ bag, and $2 90@2 95 ₱ bbl; granulated $3 40@3 60 ₱ bbl.

Graham Flour.—Trade continues quiet, [illegible] the market quoted at $2 80@4 00 ₱ bbl.

Oat Meal.—Steady, $5 15@5 40 ₱ bbl. for rolled and $5 45@5 80 for cut and ground.

Rye Flour.—The market is slow at $2[illegible] 3 50 ₱ bbl.

Corn.—Demand is quiet, with prices still lower.
No. 2, yellow, spot, 68@70½c.
No. 3, yellow, 67@67½c.

Oats.—Prices firm.
Clipped, fancy, spot, 40½c.
No. 2 clipped, white, 37½@38c.
No. 3 clipped, white, 37@37½c.

Millfeed.—Quiet.
Winter wheat, bran sacks, $19 00.
Winter wheat, middling sacks, $20 00@23 00.
Spring wheat, bran sacks, $17 50.
Spring wheat, middling sacks, $17 75.
Cottonseed meal for shipment, $26 50.

Malt.—The market is slow with trade ruling dull.
State grades, 6-rowed, 67@75c.
State, 2-rowed, 63@68c.
Western grades, 70@76c.

Barley.—Quiet demand, with prices steady at 62@73c for No. 2 6-rowed State, and 48@65c for No. 2 2-rowed State. Feed barley, 52@67c.

Rye.—Unchanged, $3.00@3.50 ₱ bbl, 68c ₱ bushel.

THE WOOL MARKET.

Unwashed fleece, fine, Michigan	21@22
" " " Ohio	22@23
" " ½-blood "	23@
" " ⅜-blood "	22@23
" " ¼-blood "	23@24
Fine delaine, Ohio	32@33
" " Michigan	28@
Washed fleece	26@30

COMPARISON OF FARM MANURES.—E. P. W., Bristol County, Mass.: We have no better authority on the value of the manures from the animals kept on the farm than those given in "Talks on Manures," by the late Joseph Harris. He gives as an average in one thousand parts or pounds of the solid manure of the horse 4.4 pounds nitrogen, 3.5 pounds of potash and 3.5 pounds phosphoric acid, while in the liquid there are 15.5 pounds nitrogen, fifteen pounds of potash and no phosphoric acid. By this computation, if all were saved there would be nearly forty pounds of nitrogen thirty-seven pounds of potash and seven pounds of phosphoric acid in a ton. In the solids from the cow there would be 2.9 pounds of nitrogen, one of potash and 1.7 of phosphoric acid. In the liquids, 5.8 pounds of nitrogen, 4.9 pounds of potash and no phosphoric acid, a total in a ton of 17.4 pounds nitrogen, 11.8 pounds potash and 3.4 of phosphoric acid in a ton. In that of the sheep the solids have 5.5 nitrogen, 1.5 potash, 3.1 of phosphoric acid, while in the liquids there are 19.5 of nitrogen, 22.6 of potash, 0.1 phosphoric acid, or fifty pounds of nitrogen, 48.2 pounds of potash and 6.4 phosphoric acid in a ton. Swine have in one thousand parts of solids, six parts nitrogen, 2.6 potash, 4.1 phosphoric acid, and in the liquids 4.3 nitrogen, 8.3 potash, 0.7 of phosphoric acid, or 20.6 nitrogen, 21.8 potash and 9.6 phosphoric acid in a ton. It will be seen that in nitrogen the sheep has the largest amount, the horse next and the swine a little more than the cow. In potash the sheep has also the most and the horse nearly as much, while the cow about half as much as the swine. In phosphoric acid the swine ranks the highest, the horse next and the sheep nearly as much as the horse, and the cow but half as much as the horse. These figures are much higher than those given for common barnyard manure, which are from nine to 11.6 pounds of nitrogen in a ton, 10.4 to 12.6 potash, 4.2 to six of phosphoric acid. It is probable that more of the value of the liquid drains away with the horse and cows than with sheep and swine, but the difference between the value fresh and that exposed to weather in the barnyard is a strong argument in favor of spreading as soon as possible after it is dropped. Commercially speaking, the ton of sheep manure is of the greatest value, as the nitrogen is the most expensive to purchase, and the large excess of potash more than balances any lack of phosphoric acid. The cow manure would be worth less than half as much as that of the horse. Yet these values are not exact. Much must depend upon the quality of food given and the condition of the animal. Neither the solids nor liquid from animals giving milk are as rich as that from fattening stock. A ton of hen manure would contain about 32.6 pounds of nitrogen, seventeen pounds of potash and 30.8 pounds of phosphoric acid, while dove manure is a little richer in all, and that of the duck a little more than half as rich, while that of the geese is but about half the value of the duck manure.

THE MIDDLEMAN.

A few years ago there was a strong demand for the elimination of the middleman in the traffic between the farmer and the consumer, yet we have found but few farmers who were ever willing to go from house to house to sell the products of their farms, with the possible exception of the milk producers near some large towns, where they can establish a regular daily trade, and perhaps add such staple articles as butter and eggs thereto, or perhaps take orders for poultry, vegetables or fruits to be delivered at a later trip. Most of them prefer to sell to the grocers and marketmen at lower prices. The time required in a house-to-house canvass can only be warranted by obtaining full retail prices, while the fact that one needs a complete assortment at almost every trip, or he will find that at most places they call for what he has not and do not want what he has, is a discouraging feature. Even those who attempt to supply the summer hotels and the seaside resorts are apt to complain of this feature, if they cannot know before preparing for such a trade about the amount likely to be needed each week, and can make it convenient to have a few special articles that they can sell almost every day. Then where one gets well known and has a reputation for being accommodating, the credit system creeps in, often to his loss.

THE WOOD OR LOGGING SLED.

The farmer often has occasion to use the sled in winter for drawing wood or logs, as heavier loads can be drawn on the snow than with wheels on a dirt road. We have seen no device that we like better than the following: Make two sleds, or what is called a bob-sled, each about 4½ feet long. The tongue or shaft should be so attached that it may turn freely, without the necessity of the sled following it, even to the point of a right angle, if necessary, to avoid obstacles. This requires an attachment to the centre cross piece of the sled, and a draft chain attached to each corner that may play through a staple or ring on the tongue. The rear sled is attached to that by a chain, which may be made short to bring it nearly up to the other, or may be lengthened out to admit of carrying logs twenty or twenty-five feet long. Across each sled should be a piece of timber strong enough to bear the desired weight. For drawing cord wood the sleds may be chained near together, and a frame placed on these timbers, which will yet leave some flexibility at the centre and at the front, allowing very short turns to be made with it. When used for logs take off this frame and place the logs directly on the cross pieces, chaining them firmly. When desired, as on the road, a simple arrangement can make the tongue or shaft firm to prevent too much swinging. This is best done by putting something through the draft chain on each side of the ring. For heavy loads the cross piece on the forward sled should be about a foot wide and 2½ to three inches thick, as through this the king bolt passes. That on the rear sled should be about four by five inches.

ARTIFICIAL ICE PONDS.

There are few better sources for getting good ice than from a properly constructed artificial pond, because they can be placed on a stream of pure running water, which can be let off during the summer months, and allowed to fill up before freezing weather. The bottom can be cleaned before the water is let in, and if there is no impurity above, the ice will be much purer than from the ordinary pond. A pond containing one hundred square rods should cut about twenty thousand square feet, or five hundred tons, when the ice will average nine inches thick, and this would be enough for several families or dairies. For a single family with small dairy, even six square rods would fill an icehouse ten feet square, twelve feet deep, or about thirty tons, more than many use for a dairy. If the ice was thicker or was cut more than once in a year, the amount would be largely increased. Both these might happen in ordinary winters in this climate. The ideal pond should be about 3½ feet deep, and with a gravelly or sandy bottom. Water in the shallow pond freezes more quickly than in a larger pond or a running stream, and where it is filled quickly the ice is clearer. A grass bottom is allowable, if it be cleaned by mowing and raking before the water is let in. The shallow depth prevents danger from drowning unless one goes in head foremost. For the smaller houses one needs no expensive outfit of ice tools. A straight-edged board to mark off the squares, a cross-cut saw, and an ice chisel, a few pikes, a runway, with blocks and ropes to draw the ice up the run, are all that are absolutely necessary. Two men to cut, two to run it into the house and one to pack it inside will make a good gang for a small pond.

HOW LONG SEEDS MAY BE KEPT.

Farmers who have seeds left after they have done planting or sowing often desire to know how long they may be kept before they lose the germinating power. If they were bought and proved good one year they will not be likely to fail the next year, but we take the following from an old table, and is meant for home-grown seeds, saved with care. Parsnips one year, beans one to two years, borage, cress, balm and salsify two years, corn, nasturtium and peas two or three years, garlic and onion three years, lettuce, leek, savory, spinach and turnip three or four years, caraway, margoram and rutabaga four years, fennel five years, parsley and peppers five or six years, carrot one or seven years, cabbage, celery and radish six or eight years, beets, cucumbers, mangel-wurzel, pumpkin, squash and melon eight to ten years, asparagus four to thirteen years. Much depends upon how they are kept, and how ripe they are when gathered. Placed in a nearly airtight metal box they will keep much longer, while if left exposed to the air, dampness or extremes of heat or cold, they do not keep as well. Professor Lindly, in his "Introduction to Botany," says melons and rye have been known to grow when forty years old, sensitive plants at sixty years, kidney beans at one hundred years, and "there are now growing in the garden of the Horticultural Society raspberry plants from seeds 1600 to 1700 years old". That is longer than many would care to keep seeds. Many gardeners will not use melon, cucumber or squash seeds until three or four years old, claiming that fresh seeds produce more vine than fruit, while the older seeds produce a less vigorous plant, with more fruit. We have known celery seed to do better three years after it was bought than it did the first year, and cabbage makes less leaves and more solid heads from seed two or three years old.

Champlain Valley Notes.

The Champlain Valley, with adjacent country in both Vermont and New York, is a very good representative farming section of the Eastern States, though more widely noted or its production of hay, oats, potatoes and butter than for grains in general or fruits other than apples.

Relative to the latter crop, there are lakeside sections which produce the best winter-keeping fruit of any in the country. Grand Isle County, situated, as it were, in the lake between the two States, yet a part of Vermont, excels in the production of apples.

The apple crop this year there, as well as on either side of the lake, is only a moderate one as to quantity, and there is a general complaint as to imperfect fruit. These imperfections were especially noticed in the Fameuse or Snow apple, which is a very popular sort in this region for shipping at this season of the year. Black, scabby spots appeared to be the great defect, and these extend to other varieties.

However, I saw some very fine lots of apples on the islands, which sold for $2 per barrel. As a railroad runs through the islands, from Burlington to Rouse Point, and several cold-storage buildings are now erected, the best of the crop is held for higher prices.

All western Vermont shows a very small growth of corn this season, as is also the case on the New York side of the lake; a season hardly remembered of its like for many years.

There was a good growth for the hay crop, but much of it stained in harvesting. Oats seemed to be the one crop concerning which there is no serious out, and this is the case in both sections. An unusually large oat crop is now being threshed. The dairy farmers feed the oats out on their own farms largely, often grinding the corn for a general feed for all stock.

Large quantities of hay are shipped from this northern lake-end section in both States. As it costs about $6 per ton above the "loose-hay-in-barn" price to place it in Boston or at Boston points, one can see that the farmer only gets from $8 to $12 per ton, even at present city prices for the best.

In Clinton County, N. Y., where I have just observed the crops, on the border of the great northern New York potato field, which extends westward to Malone, I find early in the season many were shipped on purchase from growers at twenty-five to thirty-five cents per bushel, and until ten days ago forty cents was supposed to be the top buying price. But in one week the advance in price has been ten to twelve cents, and for the last few days fifty-five cents per bushel is as low as carload lots could be purchased. It will be interesting to know what the real condition of the crop for our whole country is. My own observation is that the crop is not large, but quality good, and the rot more on paper than on the potatoes.

But my latest information is that farther west in the State, near Chautauqua and Malone, where the soil is heavier, there has been considerable trouble from rotting.

Prices continue firm, and the advance was as much a surprise to the buyers here as to any parties interested, and is only explained partially by the brisk seaboard demand.

H. M. PORTER.

Plattsburg, N. Y., Oct. 28.

Sandy and dry soils should not be fall-plowed unless a cover crop is to be put on and plowed under just before the land is to be planted or sown. It would be likely to wash if lying without cover during the winter, and some fertility would evaporate. It should be plowed as flat as possible, the furrow slice not more than half as deep as it is wide, and such land does not require to be plowed deep for any crop. Such land is better for early crops than a heavier soil, and will produce better results with a light dressing each season, or just before each crop is put in, than with a heavy dressing less frequently. Another advantage of such soil is that it can be worked with a light team and a small plow, owing to the shallow plowing. We have plowed and planted and hoed the crops on such soil before the heavy soil but a few rods away was fit to plow, and our harvest was correspondingly early, which is a decided advantage when one has a good market for early produce. It also grows less weeds than the rich soil, if the weed seeds are not taken to it in the manure, and responds readily to the commercial fertilizers, which usually show better results there, as they are largely appropriated by the first crop. Such crops as early flat turnips, beets, cabbages and cauliflowers, lettuce and spinach grow well on such soils, while peas and beans are much earlier than on heavier soils. Plants from the hotbeds can be set there very early, as the soil is so warm, especially if there is a southern exposure, so that there is little danger from frosts.

Where the high prices for coal have driven people to burning wood for fall use, the ashes should all be saved for fertilizing purposes, and we have little doubt that the ash from bituminous, or soft coal, and coke is more valuable than that from hard or anthracite coal. In fact, we think the latter is of but little value as a fertilizer, though it may be used on a heavy soil to make it more friable. Among the crops most benefited by ashes we would name potatoes, turnips and nearly all roots, grass, clover, alfalfa, peas and beans. If used on clover, peas and root crops, an addition of land-plaster or gypsum, and on the other crops of a good acid phosphate, or of bone-dust, would be of benefit. Light soils do not need as much as the heavier soils, twelve to twenty bushels per acre on the light soils being thought about right, and thirty to fifty bushels on heavy soils, which are usually lacking in potash and lime. If the crops start slowly with these fertilizers they may be quickened by sowing nitrate of soda along the rows or around the hills after the crops are up. Nitrate of soda and sulphate of ammonia are of most value when used in that way, separate from the other fertilizing material, unless the whole are used in the spring after the crops begin to grow, while we would prefer to use the ashes, potash salts and acid phosphate the fall previous, rather late, not to induce a fall growth, but that they may become incorporated in the soil before the plant roots begin to search for them.

I obtained some figures on the cantaloupe industry of Rocky Ford. Forty-four melons are contained in a crate, and 848 carloads were shipped this year. As the growers netted not less than eighty per cent. per crate and as high as $8 for some few crates, it can be guessed that cantaloupes brought into Rocky Ford considerable money.

The Rocky Ford muskmelon seems to be a select strain from the Netted Gem. Now it has a world-wide fame of its own. Cantaloupes are always liable to revert to tasteless squash like ancestors, but an explanation of some "genuine guaranteed" Rocky Ford seed not reproducing well in other sections may be found in the actions of the agent of a supposed reputable seedman who was going the rounds of the cantaloupe fields and collecting the seed from the almost worthless culls and frost-bitten fruit. And who can gainsay the sworn certificate that goes with the seed as to its origin.

An interesting institution at Rocky Ford is "Melon Day," a genuine holiday, when the whole town is in festal attire, piles of watermelons and cantaloupes are encountered at every turn, and everybody has all the melons he can eat or carry away. There is no stint and no limit. And, by the way, nothing that I have ever eaten in the melon line can compare with the Rocky Ford cantaloupes fresh from the patch, and I have eaten melons all the way from New York city market gardens down to the south of Florida, and then to the tree bearing melon paw paw in Central America.

Colonial Secretary Chamberlain establishes a good precedent in determining to visit the scene of recent disturbances in person before deciding how best to smooth the furrows of war-plowed South Africa.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, and all other persons interested in the estate of JOSIAH M. FISKE, late of Newport, in the State of Rhode Island, deceased.

WHEREAS, a petition has been presented to said Court, by Frederic D. Fisk of Cambridge, in said County of Middlesex, with certain papers purporting to be copies of the last will and testament of said deceased, and of the probate thereof in said State of Rhode Island, duly authenticated, representing that at the time of his death, said deceased had estate in said County of Middlesex, on which said will may operate, and praying that the copy of said will may be filed and recorded in the Registry of Probate of said County of Middlesex.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the ninth day of December, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the first publication to be thirty days, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this fifth day of November, in the year one thousand nine hundred and two. S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, and all other persons interested in the estate of THANKFUL R. HASELTINE, late of Melrose, in said County, deceased.

WHEREAS, a certain instrument purporting to be the last will and testament of said deceased, has been presented to said Court, for Probate, by William H. H. Tuttle, who prays that letters of administration with the will annexed may be issued to him, without requiring sureties on his bond, or to some other suitable person, the executor named in said will having deceased.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the twenty-fifth day of November, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court, and by mailing, postpaid, or delivering a copy of this citation to all known persons interested in the estate seven days at least before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this thirty-first day of October, in the year one thousand nine hundred and two.

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To all persons interested in the estate of SOPHRONIA GREENWOOD, late of Dublin, in the County of Cheshire and State of New Hampshire, deceased, or in the personal property hereinafter described, and to the Treasurer and Receiver-General of said Commonwealth.

WHEREAS, Charles J. Ellis, appointed executor of the will of said deceased, by the Probate Court for the County of Cheshire, in the State of New Hampshire, has presented to said Court his petition representing that as such executor he is entitled to certain personal property situated in said Commonwealth, to wit: A deposit of $600 and interest in the Middlesex Institution for Savings, at Concord, Mass., Book No. 19983, and praying that he may be licensed to receive or to sell by public or private sale on such terms and to such person or persons as he shall think fit—or otherwise to dispose of and to transfer and convey such estate.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the twenty-fifth day of November, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is ordered to serve this citation, by publishing the same once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court, and by serving a copy of said citation on the Treasurer and Receiver-General of said Commonwealth fourteen days, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this fourth day of November, in the year one thousand nine hundred and two. S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, creditors, and all other persons interested in the estate of CHARLES R. HAAG, late of Reading, in said County, deceased, intestate.

WHEREAS, a petition has been presented to said Court to grant a letter of administration on the estate of said deceased, to Charles J. Haag of Reading, in the County of Middlesex, without giving a surety on his bond.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the twenty-fifth day of November, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And the petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this thirty-first day of October, in the year one thousand nine hundred and two.

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, creditors, and all other persons interested in the estate of CLARENCE L. HAAG, late of Reading, in said County, deceased, intestate.

WHEREAS, a petition has been presented to said Court to grant a letter of administration on the estate of said deceased, to Charles J. Haag of Reading, in the County of Middlesex, without giving a surety on his bond.

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the twenty-fifth day of November, A. D., 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And the petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this thirty-first day of October, in the year one thousand nine hundred and two.

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To all persons interested in the estate of SAMUEL N. BUNLING, late of Somerville, in said County, deceased.

WHEREAS, L. Roger Wentworth, the trustee under the will of said deceased, has presented for allowance the fourth and final account of his trust under said will:

You are hereby cited to appear at a Probate Court, to be held at Lowell, in said County, on the eighteenth day of November, A. D. 1902, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be allowed.

And said trustee is ordered to serve this citation by delivering a copy thereof to all persons interested in the estate fourteen days at least before said Court, or by publishing the same once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court, and by mailing, post-paid, a copy of this citation to all known persons interested in the estate seven days at least before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this twenty-ninth day of October, in the year one thousand nine hundred and two. S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

At a Probate Court holden at Cambridge, in and for said County of Middlesex, on the eleventh day of November, in the year of our Lord one thousand nine hundred and two.

ON the petition of NELLIE ADAMS WHITMAN, of Newton, in said County, praying that her name may be changed to that of FRANCES NELLIE ADAMS WHITMAN, public notice having been given, according to the order of Court, that all persons might appear and show cause, if any they had, why the same should not be granted, and it appearing that the reason given therefor is sufficient, and consistent with the public interest, and being satisfactory to the Court, and no objection being made:

It is decreed that her name be changed, as prayed for, to that of Frances Nellie Adams Whitman, which name she shall hereafter bear, and which shall be her legal name, and that she give public notice of said change by publishing this decree once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, and make return to this Court under oath that such notice has been given. CHARLES J. MCINTIRE.

Judge of Probate Court.

Our Homes.

The Workbox.

LADIES' KNITTED JACKET.

This jacket is most easily made, and is useful to wear under coats or to keep shoulders warm. It is not shaped at all, and consists simply of three strips of ribbed knitting, which, being sewn properly together, will draw on to any figure in a most perfect fit. Procure two ounces of cardinal double Germantown yarn, a pair of No. 7 bone knitting needles, a No. 8 crochet needle, and three black bone buttons.

For first strip, cast one 67 stitches.

1st row—Slip 1, 2 plain (*), purl 3, 3 plain, repeat from (*) to the end.

2d row—Slip 1, purl 2 (*), 3 plain, purl 3 and repeat from (*) to the end. Continue in this ribbing until 160 rows are done and bind off loosely.

This strip forms one side of the jacket; it goes up the front, over the shoulder and down the back. Knit another similar strip. Now knit a smaller strip for centre of the back. Cast on 21 stitches, and work in the same ribbing for 60 rows, and bind off loosely. The side with the 3 plain stitches up each margin is to be considered the right side of the knitting.

To sew up the jacket—the cast-off end of the back comes against the waist—lay the back on the table before you, and place the bound-off ends of the long strip level with the bound-off end of the back, and one on each side thereof, and sew together row by row as far as the back extends upwards—which will be not quite to the middle of the long strips—and be careful to sew without making a line of holes. Then fold the fronts double, so that the cast on edge comes to the waist in front level with the cast-off edge at the back, and sew up a seam to go under the arm, leaving a space at the top for the armholes.

Work a crochet edge up the fronts and around the neck of jacket.

1st row—Beginning on the right have edge by the bottom of the front, work treble in each stitch of the knitting till you get to the bottom of the other front, but miss a stitch or two in working along the top of the back to contract it to fit neck.

2d row- Treble stitch over treble stitch of last row.

3d row -Finish with shells.

Run ribbon at neck. EVA M. NILES.

Use of Kerosene.

Here are some very useful and novel ways in which common kerosene oil may be made to serve the housekeeper who finds her battle with dirt a losing struggle:

A white flannel cloth or a piece of white knit underwear dampened with kerosene will clean any porcelain or metal bathtub. Dry the tub first and then rub tightly with the kerosene cloth. Every vestige of foreign matter will disappear, and an instant's brisk rub with a dry flannel will complete the task. A porcelain tub can be kept fresh as new by this treatment.

Kerosene will cut the accumulated grease from the drain pipe of a sink, and will keep the sink itself perfectly sweet and clean. Kerosene cuts all grease and fats generally; axle grease disappears before it and tar softens and fades away. It is so volatile that, if put in dry heat, it will quickly evaporate and leave no stain on the fabric upon which it has been used.

As a bleacher, kerosene stands high. Put half a teacupful into a washtub of water and then proceed with the washing after the usual method. The clothes will be whiter, sweeter and hygienic, and cleaner than they can be got without the use of the oil, for kerosene is a disinfectant. It kills all invertebrate life, so that many kinds of germs are utterly destroyed by its use.

Kerosene will clean dirty windows or mirrors, giving them a high lustre. It will make dull brasses shine, if not as well as some of the acid and brickdust pastes used, still so well that a little rub frequently given will keep them in good condition, and one's hands do not suffer by the process as they do if the acids are used. After polishing brass it should be rubbed over with sweet oil and wiped dry.

In the war with insect life kerosene is a sure weapon of defence. If the kitchen table is seized upon by roaches and used as a nest for their eggs, do not burn it up after ineffective scrubbing and scaldings. Put it in the yard and soak it with kerosene. Not an egg will live. In like manner treat any insect-infected furniture.

An odd and easy way to get rid of ants is to put cucumber peel around those places where they appear. The writer has yet to hear of the ant that would not flee the spot.

As a hair tonic kerosene is a specific. Put a little in a jelly glass, after putting out the light at night, and dip the tips of the fingers in the oil and rub into the scalp. It will keep the head perfectly clean, white and free from dandruff, and will bring in new hair a rapid young growth.

Last and most important, kerosene figures as a household remedy. To quote the woman from whose experience of kerosene the above facts have been drawn:

"I have saved my eldest boy twice by the use of kerosene. The first time it was out on a ranch in Kansas. He had a fearful attack of membraneous croup. His father was racing over the prairie for a doctor, who could not be got in time. I watched for the boy's death at every convulsive struggle for breath, when into my mind rushed a saying of my old nurse: 'We always killed the croup wid kerosene.' I had a horror of her advice in my childhood, but then I blessed her, as I seized my lamp, blew out the flame and succeeded in forcing some of the oil into my child's mouth. In ten minutes the hardness of the phlegm was gone and the child saved.

"Once again I used it, and with none but good effect; and, while in all cases where I could have medical aid I should prefer to rely upon my doctor, still I feel that, armed with kerosene, I am equipped to fight croup and win."—Rural World.

Washing Baby's Flannels.

The baby's underwear should be of flannel, as soft and fine as the purse can buy, and kept in the best possible condition by washing it properly. A careless laundress can ruin the best woolen garments in two or three washings, making them so shrunken and rough that they irritate the tender flesh almost beyond endurance. The following method has been used for years with unvarying success, the little garments retaining their soft, fleecy look until worn out.

Use water that is as hot as you can bear your hand in comfortably, for flannel cannot be boiled and hot water cleanses and purifies it. Dissolve a little borax in it, and add enough soap to make a strong suds, wash the flannel through two waters prepared in this way, plunging them up and down and rubbing gently between the hands. Rough usage thickens the texture. Soap should never be applied directly to the flannel. Borax softens the water, making very little soap or rubbing necessary. Rinse through clear water of the same temperature as that used for washing and press through a rubber wringer. Then just before hanging them out pull and stretch every piece in shape, for if this is neglected, the tiny wool fibres interlace causing it to become badly shrunken. Place them smoothly on the line in the sunshine where a gentle breeze will blow through them. Every part of the work should be done as speedily as possible.—New Hampshire Farmer.

Why We Eat Salt.

While many treatises on dieteties deal with salt as if it were merely a condiment, it is universally recognized to be something more. Indeed, it is an indispensable element of the food of man and animals.

A well-known authority asserts that whenever the annual consumption of salt falls below twenty pounds per head of the population, the public health is likely to suffer. In regions of the earth where salt is a scarce article, it is regarded as a substance of great value. Salt starvation is, in its way, as distressing as thrist or hunger, although it shows itself in a different way.

"The want of salt," says the Medical Press, "does not produce a definite disease, but reduces the vitality of the body as a whole, so that the persons deprived of it fall more readily victims to prevailing epidemics, as well as endemic maladies."

We use salt because there are salts in our food in its unrefined state, as nature prepares it, before it is skinned and boned, peeled and cooked, and we must replace these salts or our bodies will not be fully benefited by what we eat.

We use salt also because our blood contains it, likewise our muscles, our nerves, and, indeed, our whole bodies, and it gets used up during the life processes constantly being carried on within us.

But the salt contained in natural foods and that required for our living bodies is not common salt, but a combination of that substance with phosphates and other things, which are even more necessary and more natural than common salt itself.

Foot-Ease.

Those who suffer habitually from tired and aching feet may be glad to know that there are many ways in which this condition of things may be alleviated. Reference is not now made to the more serious troubles, such as flat foot, or to corns or bunions. It is perfectly obvious why these pests should cause pain and trouble, and whenever they occur they should at once receive professional treatment. These words are for those people who say, "There is nothing the matter with my feet; I have not a corn, and yet I am in agony if I try to use my feet much."

This condition of things may be brought about in several ways. It may be caused by a gouty condition of the system, and in such a case all wine or beer drinking should be stopped; the diet should be simple and even frugal for a time, and several doses of bicarbonate of sodium may be taken—as much as an after-dinner coffee-spoonful in water.

Sometimes aching feet mean that the weight of the body is too much for a naturally slender foot and ankle, and then a shoe should be chosen with a view to the more complete support of these members. It need not be said that rubbers should never be worn a moment longer than is necessary, and never in the house, as they check ventilation. An aching foot is often a foot simply panting for breath. For the same reason patent-leather shoes may cause much distress. House shoes should be easy and well ventilated, and it is well, if possible, to adopt the sandal for house wear.

If a foot is aching or smarting badly after much walking or standing, great relief may be obtained by plunging it for a few minutes in hot water in which has been dissolved a handful of salt. Then, with the feet still immersed, let the water be gradually cooled until it is quite cold. This treatment is also greatly helped by a little massage by the hand under the water.

Rebellious feet, especially if their owner desires to use them for much walking, are greatly benefited by the use of the rubber heel on the walking shoe, a device which relieves not only the feet, but the whole system.

Finally, one should always be careful to wipe the feet very dry after the bath, and to insure this a dusting powder will be found a useful adjunct.—Youth's Companion.

Leg-Crossing and Physiology.

Inasmuch as crossing the legs causes hollow thighs, it may be of interest to look into the matter from a medical point and notice some evil effects of the practice. The back of the knee, as well as the front of the elbow and wrist, the groin and the armpit, contains important nerves and vessels which are not so well protected against direct pressure as similar structures in other parts of the body. This space behind the knee, bounded above by the hamstrings, or tendons of the plexar muscles, and below by the heads of the great calf muscle, is called the popliteal space and contains two large nerves, the external and the internal popliteal nerves, which are the divisions of the great scrotic, together with the large popliteal artery and its vein, which carry the blood to and from the leg. Besides there are numerous branches supplying the joint, and also a number of small lymphatic glands. These structures are beneath the skin, embedded in fat and connective tissue, and the pulsation of the artery can often be felt; while of the nerves the external can be made out just inside the external hamstring.

Now it is the pressure upon these vessels and nerves, brought about by improperly crossing the legs, that often gives rise to serious trouble. Fortunately most of us throw the crossing leg so far over the leg crossed that the thigh of the first rests well up on the other, and popliteal space is left free. But very often the legs are crossed in such a way that the kneepan of one fits accurately into the popliteal space of the other, thus throwing the weight of the leg upon the vessels and nerves which it contains. The leg and foot become numb or "go to sleep" as we say, and the foot is seen to jerk up and down with a definite rhythm. This means that the nerves are compressed and the artery is constricted. If the jerking of the foot be watched one will see that it beats in time with the pulse, which means that besides the hydrostatic pressure in the blood vessels the heart is overcoming to a certain degree the weight of the leg and the walls of the compressed artery are strained. The vein, too, is constricted and our feet feel big and swollen, and the superficial veins on the back of the leg often stand out in black lines.

That these symptoms are unfavorable is beyond a doubt. A compressed nerve, if long subjected to such conditions, is bound to rebel. Sciatica, ascending paralysis, chronic numbness and cramps have often been traced directly to the pressure caused by crossing the legs. Many men "go lame" in one leg, or "have a bad knee," and it is found that they habitually cross their legs in a definite way. Constrict an artery or a vein and the penalty is sure and often swift. Thrombosis, or a blood clot in the vessel; aneurism, or a morbid dilation of the vessel; improper venous return and varicose veins, to say nothing of swollen feet and poorly nourished muscles, are some of the graver ills.

Fortunately not all or necessarily any of these affections are inevitably entailed by crossing one's legs. However, if the danger signal of numbness, swelling and jerking of the foot appear, we may rest assured that if long kept up we may and probably will suffer from one or more of these troubles.—Troy Times.

Domestic Hints.

PRUNE WHIP.

Sweeten to taste and stew one pound of prunes till the pits will slip out. When cold add well beaten whites of four eggs. Beat together until light. Put in a dish that can go on to the table, and bake twenty minutes. When cold serve with whipped cream. Half this amount is enough for a family of four persons.

CHOCOLATE CARAMELS.

A quarter of a pound of chocolate, grated, one large cup of granulated sugar, one cup of milk and a heaping tablespoonful of butter, a quarter of a teaspoonful of cream of tartar. Boil all together, stirring all the time, until the syrup hardens in cold water, and just before taking from the fire add a teaspoonful of vanilla. Beat the syrup as soon as removed from the fire, and keep it up until it is too stiff to beat any longer—if it is beaten a minute and a half it will do well. Turn out of the saucepan into a greased pan and before it is quite cold cut in squares.

VANILLA WAFERS.

One cupful of sugar, two-thirds of a cupful of butter, four tablespoonfuls of milk, one tablespoonful of vanilla, one egg, two-thirds of a teaspoonful of soda, or its equivalent of baking powder, flour enough to roll out well. Roll very thin, and watch them well, as they burn quickly.

LIMA BEANS WITH BUTTER SAUCE.

Boil the beans till quite tender, drain them and put into a saucepan with a good, generous supply of butter. Sprinkle with salt and pepper, and when the butter is quite melted serve. In place of the butter thick, rich cream may be used if preferred.

CAULIFLOWER CREAM SOUP.

Use the liquor in which a fowl has been boiled for this soup, in order to get the best results. Have a quart of such stock, and cook it in a good sized cauliflower cut in small pieces. Add to this one onion and pepper and salt. When the cauliflower is quite tender strain and press through a sieve. Add to it a pint each of milk and of cream. Heat up, thicken a bit and serve with fried croutons. Some small branches of the cauliflower may be kept out and added to the soup as it goes to table.

SPONGE CAKE.

Four cups of flour, three cups of sugar, one cup of cold water, eight eggs, two even tablespoonfuls of baking powder, the grated peel of an orange. Pour the water on the sugar in a bowl, stir until almost dissolved, beat the whites to a stiff froth, the yolks to a cream, put one cup of flour with the yolks into the sugar and water, beat hard, add the whites of the eggs, mix the baking powder with the flour, and stir into the other ingredients by degrees quickly and lightly. Bake in a shallow pan in a quick oven. When it no longer sizzles it is done. Ice with a boiled icing while hot, flavored with almond extract.

Hints to Housekeepers.

Plums, peaches, lemons and similar small fruits keep best in papers. It will repay the housewife to do her perishable fruits up in paper as soon as purchased.

For insomnia a glass of hot milk, or better still hot malted milk, taken just before retiring, will often have the desired effect.

After touching poison ivy wash the parts exposed in alcohol and avoid anything greasy.

Be careful in buying second-hand books; diseases may be easily conveyed by them, and books, moreover, are very hard to fumigate.

Rock crystal, French glass and table glass of the Colonial cut, have supplanted cut glass in the affections of the housewife. The French glass with its delicate tracings of gold and exquisitely cut stems, is especially popular just now. The Colonial kind, which comes in broad berry dishes, carafes, whiskey jugs and drinking glasses, is admirably suited to dining-rooms furnished in Colonial style.

To cook string beans, string thoroughly, cut in half, then in half lengthwise, throw into boiling water and let them come to a boil. Remove from the fire, drain, cover with cold water and let them stand in this until it is time to cook them, then drain again, cover with boiling water and cook for fifteen minutes, and when almost done add salt. When tender, drain, add a lump of butter, and salt and pepper to taste.

A pretty white shirt waist is made of the new striped waisting, with the collars and cuffs piped with green and red plaid. A band and long tabs of white taffeta silk finish the collar.

An exquisite fan, with ivory sticks, is of white chiffon, trimmed with real lace.

No wardrobe of maid or matron is complete without at least one gown of some of the attractive black silk fabrics. They are made up in combination with so many dainty laces and chiffon accessories that they are at once youthful and elegant, as well as smart. Brilliant black taffetas, black satin duchesse, peau de soie and soft semi-lustrous louisines are popular and divide favor with black crepe de chines and black lace gowns.

To make a plain lemon sherbet, a half dozen lemons, one pound of sugar, one quart of water and a heaping tablespoonful of gelatine will be needed. Dissolve the gelatine by first soaking it in a part of the cold water and then stirring it into a cupful of the water, scalded. Add the sugar, the juice of the lemons, the rest of the water and freeze.

A fever patient can be made cool and comfortable by being frequently sponged with water in which a little soda has been dissolved.

Brass work can be kept beautifully bright by occasionally rubbing with salt and vinegar.

When you serve a baked-bean salad accompany it with olive or anchovy sandwiches.

One of the new ideas in serving game and poultry as introduced by Philadelphia chefs, will appeal to the many who think that a touch of the flavor of ham improves meats. I mean the new way in which portions of chicken, squabs, reed birds and various kinds of game are dished upon a broad slice of honey-cured ham. The ham is cooked boiled and sliced thin. Under it is a slice of delicately browned toast covered with a tender lettuce leaf. It makes a pretty dish and an appetizing one.—Good Housekeeping.

•*• A pretty waist from a Paris designer is made of taffeta silk in cream and old rose stripes, the wider rose stripes being tucked and then pressed into box plaits. A blouse-vest of embroidered chiffon, a cape collar of Bruges lace and tiny gold buttons set at intervals on two narrow-stitched strappings that outline the fronts, collar and sleeve cuffs, are the accessories that finish the waist.

Fashion Notes.

•*• Embroidered white linen collars, with the new Chancellor tabs in front, and mounted on slightly curved bands, are again worn with day costumes by those whose complexion will permit the use of this heavy opaque white. They are worn with a quaint brooch in old-time fashion, and the tabbed cuffs to match turn back on the wrists of the closely fitted dress sleeves.

•*• To wear with afternoon and evening voiles, silks, cashmeres, etc., there are fichus and cape collars of white mousseline de soie overlaid everywhere with applique lace in a flat design. Some of the prettiest of these accessories are in drop-yoke shape, fastened at the back, the yoke and standing collar having an all-over vine-like pattern of lace applique, while the extreme edges of both are finished with a medallion band of cluny, Venise guipure or other lace. This adjustable drop yoke reaches low on the shoulders, rounding not quite so low on the front and back of the bodice. Similar collars of black silk muslin are trimmed in the same way with white applique, for those who object to all white, and there are also styles in butter color, ficelle, and black and white all-overs.

•*• White velvet round hats with black and white ermine tails coiled here and there among the soft velvet draperies, are one of the new fancies in millinery. The hats are finished with a torsade of black velvet which crosses the crown, traverses the extreme edge of the brim and ends in a large soft crumpled rosette at the left side.

•*• The darker velvet toques are newer in shape than most of the season's headwear. Nothing could be more becoming with an afternoon costume than one of these styles, neither exaggerated in size nor uselessly small. An attractive French model in black Lyons velvet has a full knot of the velvet just in front, and draped sides softened by shaded velvet autumn leaves coming against the hair toward the back. A golden brown velvet toque, similarly made, has red, green and russet velvet foliage intermingled with the silky folds of the velvet on each side of the hat.

•*• Now fall and winter models of Norfolk coats are brought out this season which can be worn as independent garments or to match the costume. They are made of English frieze, Sutherland tweed, Scotch cheviot, cravenette-faced cloth and the light-weight Venetians. These coats are not closely fitted. The silk-stitched Norfolk plaits are applied after the garment is put together. A curved belt of medium width is passed beneath these plaits. The fronts turn back with revers that form notches with the ends of the rolling collar, and the plain coat sleeves are simply finished with a stitched strap cuff.

•*• Velvet is a very fashionable material for trained evening dresses with bodices that are cut out rounding or deeply pointed in the neck. Odd and new colors are sought for in evening velvets—among the most popular being golden brown, moss green, and mauve that has pink and opalescent tints by electric light. Ivory white panne or Oriental satins and laces are used for decorating the darker colors. For mauve and pale-blue velvets old Venetian appliques are once more favored. These costumes are very rich in effect. Lighter weight but equally expensive velvets have again become the leading millinery fabrics for the winter season for 1902. Some of the new features in this class of goods are Persian panne and Tartan velvets, fancy striped and flowered effects, and other designs in epingle or uncut velvets. Some of the pretty repped velvets are in shadow effects, and chiffon velvets and a new weave called Merveilleux are among the latest importations. The beautiful floral designs in fancy panne are reproduced in somewhat less expensive weaves for decorating dress hats, the added value of the soft-finished velvet consisting in its adaptability for bows, draperies and *plisse* work without creasing.

•*• Very fine felt hats made in Paris have the finish of the softest kid or velvet on their surface, and other models from Vienna are of lustrous felt, that has almost the gloss of mirror satin. These come in both the extreme and the conservative shapes, with a low crown and medium brim. Flat or round plaques, to be fashioned into various novel shapes, come in felt, plain velvet and panne. When of velvet, the edge of the brim is often draped with a very handsome design in lace. Long, sweeping ostrich plumes in monochrome, or in very beautiful color combinations, trim the handsomest of the French picture hats. Some of the long, full, broad styles in pure white have tips of jet black, violet, sea-green or pink. Again, there are feathers of purple, shading down to pansy, violet and palest mauve or a single quill. Another effect is that of using two contrasting shades in the feathers which trim a single hat, green and blue, for example, orange and brown, cream and opal gray, etc. Fur, lace, cabochons, gold braid and expensive jeweled buckles are used with these trimmings, which are still placed low and flat upon the hat. Velvet flowers are large enough to take the place of the choux so long in favor, and they are used in the same way that those were, under the brim next to the hair in front, or at the back.

•*• The best dressmakers still recommend the peau de soie and peau de cygne silks to those who do not like the solid rather garish lustre of satin. Peau de soie of the finest quality has rich half-lights on its surface, and the underweave is twilled, making it more durable than satin or many kinds of silk. These fabrics appear this season in many tints—in one color, in new chameleon effects, in small flowered designs, and also in pretty patterns for accessories and fancy waists.

•*• Ladies' cloth, very light in weight and of soft, velvet-like surface, in ivory or cream white, geranium red, old rose, orange, tan or fawn color, is used for vests, cuffs, collars, girdles, strappings and the new drop yokes on Monte Carlo and other coats and tailor costumes of broadcloth or zibeline. When a lighter material is preferred for the drop yoke, plain satin with Irish lace and gold filigree buttons on the strappings are often used, also brocade, velvet-dotted taffeta, matelasse silk and all-over embroidery in Russian or Flemish designs. Some of the drop yokes are merely finished with soutache or silk-briar stitching; others again are overlaid with an entire somewhat smaller second yoke of open-work silk applique, passementerie or braidwork.

•*• In the extensive display now on view at all the importing houses of textiles manufactured expressly for tailor costumes, many novel weaves are shown in fine soft Oxford suitings, plain and plaided zibelines with silky lustre and downy camel's-hair surface, boucle cloths in various colors and designs, Scotch weaves in broken checks, invisible stripes and mixed patterns, English serges and cheviots in snowflake effects, soft Saxony homespuns, finely woven Du Barry and Covert suitings in tan, Oxford gray, Roman, Russian and military blue, sable brown, green and black, fifty-six inch diagonals, and Scotch cheviots check-woven in two distinct shades of one color. Other fabrics in tweed, sacking and camel's hair retain the chevron effects in darker or contrasting color, and still other costume suitings show an underweave of shaded semi-invisible coloring as delicate almost as the water marking on letter paper.

•*• Strappings or lines of braid still terminate on many new costumes in tiny buckles or fancy buttons, and smart Louis XIV. vests fasten with the latter trimming. The really necessary button is small, but the one for ornament only is considerably larger. In these, as in gulmps, clasps and buckles, gold, silver and jeweled designs outnumber all others.

•*• Some of the French and English costumes show a low-cut, open-fronted Eton blouse bodice, with guimps of Persian brocade. There are also graceful jackets that are put on over the vest in bolero form, but a bolero with long peplum ends falling over the dress skirt. These are also put on some of the cloth dresses made en princesse. Again on the half-fitting coat front, there are flat panels or stole ends of the cloth, lapping each other, of graduated length, and reaching from the neck to half the length of the dress skirt. Venetian and French broadcloth costumes trimmed with silk cord appliques and narrow fur bands, are made by the Paris houses as parts of early-winter trousseaux for going-away gowns and for visiting and church wear. Russian velours, costume cloth, camel's hair and zibeline are also popular materials, and fur strappings, graduated galloons and costly appliques are the chosen decoration.

•*• Dressmakers are using shot velvets for the vests, revers, collars, cuffs and girdles of their afternoon gowns. These expensive additions give a much better appearance to a simple woolen toilette than it would otherwise present. There are patterned velvets designed for the same purpose, also ribbed iridescent weaves, the grounds sprinkled with polka-dots, cubes, lance figures, etc., in white, or else a darker color than the foundation. Repped stuffs in silk and wool, velours, corduroys and other corded fabrics, whether in self colors or shot, bid fair to be in great vogue all winter.

•*• Rough-haired and rough-surfaced dress fabrics have been laid in by all dry goods merchants, zibeline taking a prominent place. The newest weaves of this material are silkier and have much longer hairs than the zibelines of last year. The demand for them increases, but many women prefer faced cloths. Though possibly less effective, in a way, than zibeline, they are more durable. Faced cloth trimmed with stitching, braiding, strappings or appliques of white cloth makes a very stylish costume for autumn or winter wear. Braidwork done by hand or on applique always looks well on cloth. It is stylish in appearance and durable as well. What is termed "frogging" adds materially to the fronts of outdoor coats, jackets, and the like, and this season there is a demand for pendeloques; crocheted cords, tassels, etc., in various designs.

•*• Rose-colored peau de soie or satin waists will be worn in the evening this season with skirts of black velvet, silk or satin. Occasionally they will be seen with skirts of dark green velvet or of lustrous repped silk. Sometimes these waists will be tucked and trimmed with applique lace, and again the trimming will be of velvet matching the skirt in color, with the addition of very narrow dark fur and jeweled buttons.—New York Evening Post.

The World Beautiful.

Lilian Whiting in Boston Budget.

Matthew Arnold dwells often upon "our need for conduct, our need for beauty"; and he finds the springs of the supply to be, not in the "strenuous" life, always at high pressure and extreme tension, but in the thoughtful leisure, in the serenity of repose, in the devotion to poetry and art. "How," he questions, "are poetry and eloquence to exercise the power of relating the modern results of natural science to man's instinct for conduct, his instinct for beauty? And here again I answer that I do not know *how* they will exercise it, but that they can and will exercise it I am sure. I do not mean that modern philosophical poets and modern philosophical moralists are to come and relate for us, in express terms, the results of modern scientific research to our instinct for conduct, our instinct for beauty. But I mean that we shall find, as a matter of experience, if we know the best that has been thought and uttered in the world, we shall find that the art and poetry and eloquence of men who lived, perhaps, long ago, who had the most limited natural knowledge, who had the most erroneous conceptions about many important matters, we shall find that this art, and poetry, and eloquence, have, in fact, not only the power of refreshing and delighting us, they have also the power,—such as the strength and worth, in essentials, of their author's criticism of life,—they have a fortifying, and elevating, and quickening, and suggestive power, capable of wonderfully helping us to relate the results of modern science to our need for conduct, our need for beauty."

Life has a tendency to become far too "strenuous" the best one can do, even, and the need is not for greater pressure of intensity, but for greater leisure for intellectual and spiritual refreshment; for a calmer trust and a loftier faith.

The joy of faith in its inspiration and emotion is wonderfully renewed from the Divine Word. "The Lord shall be unto thee an everlasting light, and thy God thy glory." It is full of these positive and radiant assurances that invest faith with the most absolute joy of confidence and positiveness of trust. These assurances meet the eye and enter the heart with the certainty of a personal message, directly given from God. And it is in this realm of the higher thought, of that culture of the soul which is the true object and aim of the temporary life on earth, that the relief from the too strenuous pressure of affairs must be found. The human soul is so constituted that it cannot live unless it breathes its native air of inspiration and joy and divineness. It is stifled in the "strenuous" lower life; its energies are paralyzed unless it seek renewal at the divine springs. It is this strenuousness of latter-day life, unrelieved by love and by prayer; unrelieved by the spiritual luxury of loving service and outgoing thought; this strenuous attitude, intent on getting and greed and gain and personal advantage, that, at last, ends in the discords and the crimes, the despair and the suicides whose records fill the daily press. The cure for all these ills is to be found only in the higher life of conduct and of beauty. "Thou shalt show me the way of life: Thou shalt make me full of joy with Thy countenance." Here, and here, alone, is the cure, the relief, the leading into peace and serenity and exaltation. It is not that the "fierce energy" of life is in excess, but that its application is in wrong and unmeaning directions. Let the soul find its true refreshment and infinitely sustaining tide of energy in God, and immediately "old things have passed away," and "all have become new," and life is full of exhilaration and joy. "Every day we ought to renew our purpose, saying to ourselves: This day let us make a sound beginning, for what we have hitherto done is naught." Every day is a new and definite re-entrance upon life. Nor is it worth while to linger too much on the mistakes, the errors of yesterday. True, the consequences of errors and mistakes linger in life until they are worked out; but the working out is, after all, only a question of time and of unfaltering persistence in the upward way, and thus a new foundation of life is laid: "old things have passed away and all things have become new." It is in the serene and joyous exaltation of life alone that one truly lives; in that sweetness of mutual trust and generous aims and ever-flowing love that radiates its joy and beauty to all with whom it comes in contact, and which is perpetually fed and perpetually renewed by the constant communion of the soul with God.

The Brunswick, Boston.

If we accept Mr. Davitt's analysis of the Indian famines, we shall have to consider that the United States is directly responsible for the present failure of the Philippine rice crop.

Notes and Queries.

THE NATURE OF THE SOLAR PROMINENCES.—"J. W. R.": M. Julius has lately offered a new explanation of the nature of the solar prominences to be seen in the spectroscope. He abandons the idea that layers of different materials exist in the solar envelope and supposes that its gases the different elements are mingled. Of course the quantity of the vapor of a metal of high specific density will augment with the depth at which it is found in the solar atmosphere, but it exists, he says, throughout the atmosphere. The solar tornadoes produce abnormal dispersions wherever two tornadoes—whirlpools—meet, and all the phenomena observed in the spectroscope are entirely explicable on the theory just outlined, from which it is concluded that a chromosphere composed of layers of different substances does not exist and that it really is nothing but a series of waves and whirlpools rendered visible by the abnormal dispersion of the light coming from different depths within the solar envelopes.

IMPORTANT EVENTS IN THE LIFE OF PRESIDENT.—"Roosevelt Admirer":

Born in New York	Oct. 27, 1858
18—Entered Harvard	1876
22—Graduated from Harvard	1880
22—Studied law with his uncle	1880-1
23—Elected to New York Assembly	1881-4
26—Leader of New York delegation to Chicago convention	1884
27—Started his Western ranch	1885
28—Defeated for New York mayoralty	1886
30—United States civil service commissioner under President Harrison	1889
37—Police commissioner of New York city	1895
39—Assistant Secretary of the United States Navy	1897
40—Accepted command of Rough Riders	April 25, 1898
40—Resigned Navy Department position	May, 1898
40—In San Juan fight	June, 1898
40—Promoted to be colonel	Sept. 27, 1898
40—Nominated for Governor of New York	June, 1898
40—Elected Governor of New York	Nov. 6, 1898
42—Nominated for Vice-President	June 21, 1900
43—Became President of the United States as result of President McKinley's death	Sept. 14, 1901

AGES OF PRESIDENTS AT INAUGURATION.—"Voter":

1. George Washington	57
2. John Adams	62
3. Thomas Jefferson	58
4. James Madison	57
5. James Monroe	58
6. John Quincy Adams	57
7. Andrew Jackson	62
8. Martin Van Buren	55
9. William Henry Harrison	68
10. John Tyler	51
11. James Knox Polk	50
12. Zachary Taylor	64
13. Millard Fillmore	50
14. Franklin Pierce	48
15. James Buchanan	65
16. Abraham Lincoln	52
17. Andrew Johnson	56
18. Ulysses S. Grant	46
19. Rutherford Burchard Hayes	54
20. James Abram Garfield	49
21. Chester Alan Arthur	51
22. Grover Cleveland	47
23. Benjamin Harrison	55
24. Grover Cleveland	55
25. William McKinley	54
26. Theodore Roosevelt	42

Historical.

——The Maine law, so called, was adopted by the State of Maine in 1851. It forbade the making or selling of intoxicating liquors within the State except for medicinal purposes. It is still in force in Maine, and has been tried at various times by other States as a method of checking or abolishing the unbearable evils of drunkenness.

——The population of the United States in 1790 was 23,191,876, an increase of six million since 1840. Railroads, telegraphs, steamers, banks and commerce were increasing as rapidly as the population. Prosperity was universal, but the only new direction it had taken was the great production of California.

——Fort Sumter was almost ready to surrender when Lincoln became President, March 4, 1861, for its garrison had hardly any provisions left. Early in April, the President ordered a fleet to leave New York for Charleston, carrying provisions for the fort. As soon as this became known the Confederate batteries were ordered to attack the fort. After a heavy fire of thirty hours, the ammunition of the fort was almost exhausted and its wooden buildings were on fire, and Major Anderson surrendered the fort with the honors of war. The fleet returned to the North, having been unable to give any assistance.

——President Jackson was a man of great natural powers of mind. He was uneducated and had violent passions; but he was absolutely honest and sincere, and did not know what fear or hesitation meant. When he believed that anyone was doing harm to the people, he struck at him if it were an enemy of his own, regardless of the feelings of his opponents, who were just as confident that they were right in their views. He was far more anxious to crush opposition than to convince and convert his opponents. It thus came about that the political history of these eight years was one of almost continual excitement, and Jackson's friends and enemies accused one another of almost every crime imaginable. The four principal enemies attacked by Jackson were the former office holders, the United States Bank, the "American system," and the "Southern nullificationists."

——Maine, as far as the Penobscot river, was seized by the British in 1814, and was held until the end of the war.

Poetry.

A GOLF REMINISCENCE.

When we played shinny long ago
Our clothing did not fret us.
We wore no coats of sunset glow—
Our mothers would not let us.
Oh, we were coltish in our glee;
We loved to prance and whinny;
We asked no "niblick" and no "tee"
When we were playing shinny.

Oh, where are those companions now—
The thin boy we called "fatty";
The boy ill clad, with grimy brow;
The boy so neat and natty;
The boy who was so very fat
His comrades named him "skinny?"
There is no friendship here like that
We knew while playing shinny.

Perchance one day a club I'll take
And set the golf ball flying.
At least an effort I may make,
There's naught, you know, like trying—
But I shall miss those boyish friends,
So freckle-faced and grinny;
No modern game can make amends
For those lost hours of shinny.
—Washington Star.

THE DEAR LITTLE GIRL THAT I KNEW.

In the wonderful calm of the twilight; in the night when the day voices cease,
I sit by the bank of the river, the marvelous River of Peace,
And out of the shadows there steaieth a face with the morning aglow,
And the fragrance of blossoms that faded in fields of the long, long ago.
Dim forms o'er the river are floating in barks that the shadows enfold,
And a song through the silence is stealing, a song unforgotten and old;
White hands reaching out in caresses, the hearts that were loving and true,
And the form, like a phantom that blesses, of a dear little girl that I knew.

Oh, cold is the heart of the Northland, and chill is its winter of snows,
And over the mound of her sleeping the wind like a requiem blows.
Yet out of the grave and its silence she comes through the pitiful night,
And her breath on my forehead is warmer than wine that is kissed by the light,
And her heart beats to mine like the music Love plays on his harp when he wills,
Till it reaches to uttermost spaces, and the soul of creation it thrills.
And, sitting where shadowy faces pass by me in phantom review,
I sigh at the thought of the graces of a dear little girl that I knew.

Oh, white was her hand as the mantle that Winter has woven of snows;
And red were her lips as the ruby that under a tropic sun glows;
And true was her heart as the truest that ever Death's finger has stilled;
And blue were her eyes as the bluest of skies that the day-fairies build;
And still through the silence she beareth today and its trials surcease,
As I sit by the bank of the river, the marvelous River of Peace;
And her lips on my forehead fall lighter and softer than beat of the dew,
As I dream of my beautiful darling, the dear little girl that I knew.

I know not the love that enhaloes the ones that in loving are blessed,
But still in the darkness and silence my lips by my darling's are pressed.
No bliss and no rapture of living and loving my being have thrilled;
No heart to my warm heart is beating, none heedeth the structure I build;
But still when the twilight has gathered, I sit in the darkness alone,
And dream of a face unforgotten, a face that smiles back to my own,
And I know, though the world gave me nothing, not vainly the swift moments flew,
Since they leave in my fond recollection the dear little girl that I knew.
—Alfred J. Waterhouse, in New York Times.

OF LITTLE FAITH.

O troubled heart of mine! we must
Less anxious be,
And learn our Father's love to trust
Implicitly.
For why should we with doubt and fear
Sit gloomily in shadows here,
And question whether God is near?

We should not doubt our Father's love,
Nor doubt His care;
He showers blessings from above
Free as the air;
And yet we put His gifts aside,
And fear that evil may betide;
Our sorrows may with us abide.

O let us love Him more, my soul!
Love and adore!
And on Him all our burdens roll
For evermore.
Let us look up into his face,
And there His loving kindness trace,
His saving and His keeping grace.
—Anna M. Hicks, in Christian Advocate.

AUTUMN.

The sun has kissed the forest trees
With one long, loving kiss—
A kiss that all the Summer through
Was one sweet, constant bliss.
And now stern Winter drawing near
Beholds and shakes his head,
And all the trees, like bashful maids,
Are shamed and blush to red.
—New York Times.

....We bring them bonbons every night,
And when we win their hearts to boot,
The darling girls turn round and say,
"To make him love you, feed the brute!"
—The Smart Set.

Miscellaneous.

The Kiss.

[Adapted from the Russian by Herman Bernstein.]

All the six batteries of the N. reserve artillery brigade on their way to the camps stopped to pass the night in the village of Mestechko. When the tumult was at its highest, and the officers bustled about noisily near the cannon, a man in plain clothes appeared on horseback from behind the church, and, lifting his hat, said:

"His Highness, Lieutenant-General von Rabbek, invites the gentlemen officers to his house for tea." . . .

And the man on horseback raised his hat again and disappeared behind the church.

A half an hour later the officers, nineteen in number, stood at the threshold of the General's house. They were met by Von Rabbek himself, a good-looking old man of about sixty, in plain clothes. The General shook their hands and smiled, though it was clearly evident on his face that he invited the officers merely because he thought decency required it.

When the officers entered the large dining-room, ten or twelve ladies and gentlemen were already seated by the long table, drinking tea.

"Gentlemen, there are so many of you here that it is impossible to introduce you one by one!" said the General in a loud voice, trying to appear very cheerful. "Introduce yourselves, gentlemen, as best you like!"

The officers, some with very serious, even stern faces, others smiling forcedly, and all feeling rather awkward, made bows to those in the room and seated themselves by the table to drink tea.

Captain Ryabovich, a small, round-shouldered man, in spectacles and lynx-like sidewhiskers, felt more awkward than any of his fellow-officers. While some of his colleagues tried to look serious, and others smiled forcedly, his face, his lynx-like sidewhiskers, and his spectacles seemed to say: "I am the most timid, the most bashful and colorless officer in the entire brigade!" At first he could not fix his attention on any one face or object in the room. The faces, the dresses, the cut-glass decanters filled with cognac, the steam rising from the glasses of tea,—all these blended into one huge impression, which filled Ryabovich with confusion and with a desire to hide his head somewhere. But a little later he mastered himself, and recovering his sight, began to observe things.

Von Rabbek and his family were skillfully entertaining the officers, looking after their glasses and their mouths, inquiring now and then, whether all of them were drinking, whether every one's tea was sweet, why this one ate no biscuits, why that one drank no cognac. And the more Ryabovich looked on and listened the less he liked this far from sincere but well-disciplined family.

After tea the officers stepped into the parlor, where they found many young and good-looking women. The piano began to thunder; then a sad waltz was wafted through the wide-open windows, and somehow everybody recalled that spring was in the air. All began to feel the fragrance of young poplar, roses and lilacs, which filled the room. Under the influence of the music, the cognac began to tell on Ryabovich—he smiled and watched the women, and it seemed to him that the odor of roses, poplar and lilacs came not from the garden, but from the faces and the dresses of the women.

Soon dancing sets were formed. Ryabovich stood near the door, among those that did not dance. He had never danced in his life, he had never clasped the waist of a woman. Ryabovich liked to see a man taking a strange girl by the waist for a dance, but he could never imagine himself in the position of that man. There was a time when he envied his comrades their daring and cleverness and he suffered. The knowledge that he was shy, round-shouldered, long-waisted, with lynx-like sidewhiskers, pained him acutely; but in the course of time this feeling wore off, and now as he looked at the dancers he no longer envied them, but merely smiled sadly.

When the quadrille started, the young Von Rabbek invited two of the officers for a game of billiards. To while his time away Ryabovich followed them. He watched the players indifferently, and before long he began to feel lonesome, and it seemed to him that he was in everybody's way there. . . .

He decided to return to the parlor, but as soon as he walked out of the billiard-room he noticed that he did not know where to go. He turned to his right, and soon found himself in a half-dark cabinet, which he had not passed on his way to the billiard-room. He stood there awhile, then he opened the door before him and entered a perfectly dark room. The dull sounds of a melancholy mazurka were now heard from behind the door. Here, as in the parlor, the windows were wide open, and the odor of poplar, lilacs and roses filled the air. . . .

Ryabovich paused in hesitation. . . . Suddenly quick steps and the rustling of a dress were heard, a woman's voice whispered emotionally, "At last!" and two soft, perfumed, feminine hands clasped his neck; a warm cheek touched Ryabovich's cheek, and a ringing kiss resounded. But she soon uttered a soft cry, and, as it seemed to Ryabovich, started back with digust. . . . He was also on the point of exclaiming, but he controlled himself and rushed towards the other door.

When he returned to the parlor his heart was beating fast, and his hands trembled so perceptibly that he was trying to hide them behind his back. At first he was tortured with shame, fearing lest everybody in the parlor knew that a woman had embraced and kissed him a little while before. He looked on all sides uneasily, but satisfied that the people danced and chatted as before, he gave himself up entirely to his new, never-before-experienced sensation.

He now felt like dancing, talking, running into the garden. . . . He forgot that he was round-shouldered, colorless and uninteresting.

At supper Ryabovich ate and drank mechanically everything that was served him; and paying no attention to what was going on about him, endeavored to explain to himself how the incident came about. . . . The incident was of a rather mysterious and romantic nature, but it was easy to explain it. A young lady must have made an appointment with some one in the dark room, she must have been waiting there, and in her nervousness have mistaken Ryabovich for her hero.

"But who is she?" he asked himself, surveying the faces of the women before him. "She is surely young, for old women don't make such appointments."

And, then, she is surely intelligent, he thought; indeed, he felt it by the rustle of her dress, by the perfume, by her voice. . . .

He fixed his eyes on one young lady, with beautiful hands and shoulders, an intelligent face and a fine voice. . . . And as he gazed at her, he wished her to be the one that kissed him. . . .

After supper the guests, having eaten and drunk their fill, began to take leave. The officers walked out into the garden. They were half-intoxicated, lively, satisfied, but the darkness and the silence threw them into a rather pensive mood for a while. Ryabovich wondered whether the time would ever come when he, like Rabbek, would have a large house, a family, a garden; whether he would ever be in a position to show marks of kindness to other people, to give them to eat and drink; to make them satisfied.

On reaching home, Ryabovich went to bed immediately. "Who is she?" he asked himself, staring at the smoke-stained ceiling. Beautiful feminine hands, shoulders, eyes, dress, and brooches hovered about before him in his imagination. He tried to fix his attention on these images, but they seemed to wink and hop about hither and thither. When he closed his eyes the images disappeared altogether, and he heard quick footsteps, the rustling of a dress, the sound of a kiss—and he was seized with boundless happiness.

Rising in the morning he felt that last night's joy was still throbbing in his heart. He glanced with delight at the windowpanes, which were tinted into a golden hue by the rays of the rising sun, and listened with pleasure to the noise on the street.

A quarter of an hour later the brigade started off for the camps. As they passed the General's house, Ryabovich looked at the windows. The shutters were closed. The people were evidently sleeping yet. She who had kissed him last night was also sleeping. He pictured to himself the bedchamber, with a wide-open window, green branches peeping in at the window. The odor of poplar, lilacs and roses in the room, a bed, a chair, the dress which had rustled last night, slippers, a small watch on the table near by—all this he saw clearly and distinctly, but the outlines of her face, the gentle smile,—that which was most important and characteristic,—escaped his imagination. Ryabovich cast a farewell glance at the village of Mestechko, and he suddenly became sad, as though he were taking leave of something very near and dear to him. Presently he brightened up.

"All that I dream of now and that now seems to me impossible is in reality a usual thing," thought Ryabovich, looking at the clouds of dust before him. "It is a usual thing, experienced by everybody. . . . For instance, that General loved in his time, now he is married and has children. Captain Vakhter is also married and beloved, in spite of the fact that he isn't so well built and that the back of his neck is ugly and red. . . . Salmanov is rude, and yet had a love affair which ended in marriage. . . . Am I not like everybody else?"

And the thought that he was an ordinary man like everybody else filled him with joy and courage and hope. Now he pictured her boldly, giving full freedom to his imagination. Mentally he spoke to her and caressed her, and pictured himself at the supper-table with his wife and children. . . . Soon camp-life set in, and one day resembled another. During all this time Ryabovich felt and thought and behaved like a lover. In the evening when his fellow-officers discussed love and women, he would listen, coming closer to them; and his countenance would assume such an expression as is usually upon soldiers when listening to the story of the battle in which they had participated themselves. Whenever Ryabovich went on a spree, together with his comrades, or behaved otherwise unbecomingly, he was downcast on his return, feeling guilty before her and mentally begging her forgiveness.

During sleepless nights, when he recalled his childhood days, his father and mother, and everything dear to his heart, he invariably thought of Mestechko, of the dark room and of the kiss—the pleasantest episode in all his life.

Youth's Department.

THE NEW BABY.

Yes, I've got a little brother,
Never asked to have him, nuther,
But he's here.
They just went away and bought him,
And, last week the doctor brought him,
Weren't that queer?
When I heard the news from Molly,
Why, I thought at first 'twas jolly,
'Cause you see,
I s'posed I could go and get him
And then mamma, course, would let him
Play with me.
But when I had once looked at him,
"Why," I says, "Great snakes, is that him?
Just that mite?"
They said "Yes," and "Ain't he cunnin'?"
And I thought they must be funnin'—
He's a sight!
He's so small, it's just amazin',
And you'd think that he was blazin',
He's so red.
And his nose is like a berry,
And he's bald as Uncle Jerry
On his head.
Why, he isn't worth a brick,
All he does is cry and kick,
He can't stop.
Won't sit up, you can't arrange him—
I don't see why pa don't change him
At the shop.
Now, we've got to dress and feed him,
And we really didn't need him
More'n a frog;
Why'd they buy a baby brother
When they know I'd good deal rather
Have a dog? —Kansas Farmer.

The Four-Leaf Clover.

One day Priscilla's mother said that she might go out to play, and Penelope's mother said that she might go out to play, and the two little girls sat down on the stone wall on the other side of the road, and considered what they would do next. Penelope's ragged, tangled mop of a Skye sat on one side, and wagged his fringy, fluffy tail some of the time, and Priscilla's tidy little Boston terrier sat on the other side, and wagged his funny, stumpy tail all the time. Then a middle-sized girl came along, and she sat down on the stone wall with Penelope and Priscilla. This was Margaret Ainslee Sheridan, and Penelope and Priscilla felt very proud to sit on the same stone wall with her.

"Didn't you ever find a four-leaf clover, Priscilla?" asked Margaret, "and didn't you ever find a four-leaf clover, Penelope? Why, I've found bushels and quarts of them!" And then, because Margaret was a good girl and meant always to tell the exact truth, she added quickly, "At least I found three in one day once, and I've often found one at a time."

"They mean good luck, don't they?" asked Priscilla.

"Yes, ever such! After I found one once, Aunt Helen sent me a set of gold-band china dishes; and I've no doubt something happened the other times, if I had only thought to remember."

"Oh, my!" said Penelope and Priscilla together.

"I wish I could have some good luck," said Penelope, rather dolefully. "I tore my red dress yesterday, and this morning I lost my handkerchief."

"Why don't you get a four-leaf clover?" suggested Margaret. "I will tell you where they grow. The surest way is to sleep with the clover under your pillow; and then, when you dress in the morning, put it in your left shoe,—the left, remember,—and you'll have good luck all day."

"Yes, let's," said Penelope and Priscilla in chorus again.

Then Margaret told Penelope and Priscilla just where four-leaf clover grows on the sunny slope of Reservoir Hill; and she jumped from the stone wall and went up the road, and Penelope and Priscilla jumped from the stone wall and went down the road. The tidy little Boston terrier and the ragged, tangled mop of a Skye chased along for a few minutes and then decided they would go home. I don't know what the dogs did after that, but Priscilla and Penelope went to Reservoir Hill and hunted and hunted and hunted, until Priscilla found one little four-leaf clover and Penelope found two great, splendid four-leaf clovers.

Penelope and Priscilla were sorry that Priscilla could not find two, because they always liked to have everything perfectly fair; but if she couldn't, she couldn't. "And anyway," she said cheerfully, "maybe a little four-leaf clover is just as lucky as a big four-leaf clover."

"Oh, of course," said Penelope, politely; "but two's luckier than one."

"Oh, of course," said Priscilla.

Then they ran home and told their mothers all about it; and when they went to bed that night each put the cluster of magic leaves under her pillow.

In the morning, Priscilla's mother came to Priscilla's door and told her it was seven o'clock. Priscilla was awake; and she jumped out of bed, and put the clover in her shoe.

"Now I'm going to have good luck all day," she thought; and she dressed quickly, and went down to breakfast. She looked over her arithmetic examples, for two were hard ones; and then she thought she would practice.

"I want to be all ready for my good luck when it comes," she thought, as she began to play her five-finger exercises.

"Will you please post this letter for me, Priscilla?" asked her mother, as she kissed her goodby before she went to school; and Priscilla promised faithfully to remember.

When Priscilla went out the front door, Dr. Harris was driving by, and he called out:

"Want to ride, Priscilla? I am going your way."

Priscilla wished to ride, but she wished to have Penelope ride, too. So they stopped a minute in front of Penelope's house, though the doctor said he could not wait. Then Penelope's mother shook her head to them from the window, and they drove along.

"I think Penelope's father is going to take her with him," said Priscilla, thinking, "but it seems funny to go to school without Penelope." When they reached the second street the doctor turned. "We'll go this way," he said. "It will be much nicer, and you have time enough for it."

But Priscilla remembered the letter. "Oh, I can't," she said sorrowfully. "I must leave this letter at the office for mother. I'd better get out."

"Nonsense!" said the doctor. "You can give me the letter, and I'll post it on my way back. Take the drive when you can get it." He looked rather cross, and Priscilla didn't like to refuse; but she did.

"Oh, no, please," she said decidedly. "I promised mother, you know."

The doctor's eyes looked twinkly, though he said, grumbling, "All right, but you've only yourself to thank for missing something nice."

They were very jolly all the way, and Priscilla posted her letter and went to school.

When Penelope's mother came to her door and told her it was seven o'clock, she was awake, planning what she would do with her good luck when it came. She was just thinking what she would buy with a quarter, supposing Uncle Joe should give her one; and, of course, she did not like to get up until she had decided. Then, to her great astonishment, her mother came to her door again; and she heard the breakfast bell ring and everything was horrid all at once. She dressed in a hurry; and the buttons wouldn't button and the strings wouldn't stay tied, and she dropped her new brush and broke a piece out of the handle. It was some comfort to remember that she had the clover in her shoe.

She forgot to look at her arithmetic examples, though two were hard ones; and, when she went to practice, she found the last St. Nicholas on the piano-chair, where she had left it the night before, and she thought she would just look again at one of the puzzles. She did not guess the puzzle. When she began to play her five-finger exercises, it was so late that she did not have time to play a single page.

When Dr. Harris and Priscilla stopped in front of the house, she was upstairs hunting for her hat. When her mother told her that Priscilla had gone by, the big shiny tears came up in her eyes till her mother kissed them away.

"It's very funny to go to school without Priscilla," she said mournfully.

"Will you please post this letter for me, Penelope? I know you are rather late, but I particularly wish to have it posted this morning," said her mother; and Penelope promised faithfully to remember.

Penelope had to run because she did not wish to be late. After a while she met three other little girls in her class, and they walked along together. They talked merrily together, and so it was not surprising that Penelope forgot all about her mother's letter until she reached the school. There was not time to go back; but she saw the provision boy who carries the big basket, and she asked him if he would please post it. Joe promised that he would, and he put the letter in his pocket; and he did not think of it again until after supper that evening.

Penelope did not have a happy morning, for she was too late to talk to Priscilla before school, as usual, and she failed in her arithmetic class; but she brightened up at recess, remembering the good-luck clover in her left shoe. Penelope and Priscilla were very glad to see each other again after the long time, and they skipped home from school together and were very jolly.

The afternoon was not so pleasant as usual, because Penelope had to practice for half an hour, and that made them miss an electric-car ride they might have had with two of their school friends who could not wait. But they played house, and had a pretty good time after all.

Just before sunset, when they were sitting on the stone wall on the other side of the road, the expressman came by and left a big package at Priscilla's house. Then they watched to see if he would go to Penelope's house, but he did not. Then they went in to supper.

After supper, Priscilla's mother said, "Priscilla, would you like to see a copy of the letter you posted for me this morning?"

Priscilla was very much astonished, but she said that she would like to see a copy of it very much. This was the letter.

"Friedmann, Hotzen & Co.:

"Dear Sirs—If you receive this letter today, Thursday, will you kindly send by the afternoon express the dolls' laundry set which you showed me Saturday? If you do not receive the letter in time for that express, let the order wait until I see you."

The letter was signed by Priscilla's mother. Priscilla's eyes danced when she saw the laundry set, three set tubs, large enough for a good washing, a wringer, clothespins, clothes-basket, flatirons, and, best of all, a water tank which could be connected with the tubs, so that real water could come from the shining faucets.

"I thought I would help out your four-leaf clover," said her mother.

After Penelope had finished her supper, her mother asked her if she would like to see the letter she had posted that morning. She was very much astonished, but she said she would very much. The letter was just the same as the letter Priscilla read, only that it was signed by Penelope's mother. Then Penelope told her mother that she gave it to the provision boy, and they wondered together what had become of it.

"I thought I would help out your four-leaf clover," said her mother.

Then Penelope remembered the package that was left at Priscilla's house, and she skipped over to see Priscilla just as Priscilla was skipping over to see her.

They set up the lovely laundry, and they washed out some clothes and hung them out to dry; but it was too late to heat the irons to iron them, and they kept wishing that Penelope's letter had gone when Priscilla's did.

When Priscilla and Penelope kissed each other good night, Penelope said, "Wasn't it funny that your little bit of a four-leaf clover brought you such lovely luck all day long, and my two great, splendid four-leaf clovers never brought me one bit of luck at all?"

"Yes, wasn't it very, very, very funny!" said Priscilla.—Christian Register.

Gems of Thought.

....If we keep our souls in patience, if we hold fast to our faith and hope and love, the soft streams of healing power will flow into us and through us. We shall receive and give out the infinite good.—Charles G. Ames.

....Good would it be for men if, remembering that life is something more than toil and struggle, they would snatch an hour from their labors, and seek in the stillness of their souls that voice which only the humble can hear, that strength which only the meek can obtain.—James Drummond.

....We are always wanting to be doing, to be giving, to be planning for the future, to be mapping out all our life; instead of resting and receiving day by day, leaving the morrow to our God, and rejoicing in Jesus Christ amidst all our falls and failures. Instead of going on rejoicing in Jesus, we are tempted to despond, and to go on desponding, after every failure, negligence and sin.—George H. Wilkinson.

....What is the secret of serenity? We all want to know it. Indeed, we do know it already. There is no secret about it. St. Paul speaks out plainly enough. Everybody can see what it is. All things work together for good to them that love God. We must love God; that is the heart of it. Happiness, content, and right satisfaction, all doubts answered, all dark places lighted up, heaven begun here—this is the reward of loving God. In this world, tribulation; yes, but good cheer in spite of that, for the Son of God, whom we love, has overcome the world.—George Hodges.

....Man's happiness consists in present peace, even in the midst of the greatest trials, and in more than hope of a glorious future.—Charles G. Gordon.

....We should always have in our heads one free and open corner, where we can give place, or lodging as they pass, to the ideas of our friends. It really becomes unbearable to converse with men whose brains are divided up into well-filled pigeon-holes whereinto nothing can enter from the outside. Let us have hospitable hearts and minds.—Joubert.

....It is true that we need help in following the religious life, and that, under the conscious-ness of sin and in our thirst for God, we turn instinctively to nobler spirits than our own, and seek their aid and guidance.—James Drummond.

....No sunrise, mountain top, or June of blossom is so beautiful and so inspiring by its beauty, as human faces at their best. A smile is the subtlest form of beauty in all the visible creation, and heaven breaks on the earth in the smiles of certain faces.—William C. Gannett.

....While we sit brooding over our troubles and the hardships of our lot, the great world goes tranquilly on, the infinite sky hangs over us, the everlasting order abides, and "God is where he was." Can we not forget or endure our pestering "insect miseries" for a little while in the presence of the eternal laws and eternal powers?—Charles G. Ames.

....Truly, there is a tide in the affairs of men, but there is no gulf stream, setting forever in one direction.—Lowell.

....No man can produce great things who is not thoroughly sincere in dealing with himself.—Lowell.

....There is no good in arguing with the inevitable. The only argument available with an east wind is to put on your overcoat.—Lowell.

....A great man is made up of qualities that meet or make great occasions.—Lowell.

....I know no method to secure the repeal of bad or obnoxious laws so effectual as their strict construction.—Grant.

....He serves his party best who serves his country best.—Hayes.

....We ought to do our neighbor all the good we can. If you do good, good will be done to you; but if you do evil, the same will be measured back to you again.—Pilpay.

....There is no gathering the rose without being pricked by the thorns.—Pilpay.

....Guilty consciences always make people cowards.—Pilpay.

....Moderation is the noblest gift of Heaven. Euripides.

Brilliants.

If I can stop one heart from breaking,
I shall not live in vain;
If I can ease one life the aching
Or cool one pain,
Or help one fainting robin
Unto his nest again,
I shall not live in vain.
—Emily Dickinson.

If you would know of what frail stuff you're made,
Go to the tombs of the illustrious dead;
There rest the bones of kings, there tyrants rot;
There sleep the rich, the noble and the wise;
Their pride, ambition, beauty's fairest form,
All dust alike, compound over common mass:
Reflect on these, and in them see yourself.
—Menander, an Atkinsonian poet of B. C. 320

Go to the roadside graves thyself to know,
Muse on the bones and dust that sleep below;
There sleep the monarch, there the despot lies,
The rich, the proud, the beautiful, the wise.
Mown down by time, these found a common tomb,
And tell thee what thou art and what thy doom.
—Menander, B. C. 321.

Small service is true service while it lasts.
Of humblest friends, bright creature, scorn not one;
The daisy, by the shadow that it casts,
Protects the lingering dewdrop from the sun.
—Wordsworth.

Use well the moment; what the hour
Brings for thy use is in thy power;
And what thou best canst understand,
Is just the thing lies nearest to thy hand.
—Goethe.

Thou canst not gather what thou dost not sow;
As thou dost plant the tree so will it grow.
—The Code of Manu.

"Abundance is a blessing to the wise,
The use of riches in discretion lies;
Learn this, ye men of wealth—A heavy purse
In a fool's pocket is a heavy curse."

Curious Facts.

—The biggest tree on the face of the earth has just been found in a wild and unfrequented nook in California. It measures 109 feet in circumference, or having a diameter of thirty-two feet. This tree, fortunately, stands just within the limits of the United States forest reserve. It is supposed to be four thousand years old, and when our Saviour walked the earth in the Holy Land it already had a diameter of about twenty feet.

—In Bohemia sixty-three nobles own the greater part of the country. None of their estates are less than twelve thousand acres.

—Thirty thousand English women live on canal boats.

—In Russia, when a weapon of any kind is purchased, a permit must be secured from the local authorities. The name of the man who makes the purchase, with the number of the weapon, is recorded. If the purchaser ever wants to dispose of the weapon, he must notify the authorities and cause the transfer to be recorded on the books of the firm which sold it.

—It is estimated by engineers that the leakage from the gas pipes of London equals nine per cent. of the total manufacture.

—The barometer rises higher at Irkutsk, in Siberia, than anywhere else in the world.

—The record price for a clock is $168,000 paid for the clock made by Louis XVI. of France. It was purchased by one of the Rothschilds.

—In an experiment whose purpose was to trace the stages of development of a baby's mind, the infant was placed before a mirror daily. During the earliest stage of the test, he simply looked at his reflection, as birds do. He next showed fear of it, as do many of the higher animals. He then grasped at it with his hands, as cats strike at reflections with their paws. Later he looked behind the glass to find the object, as cats and monkeys have been known to do. But on the 420th day of his life he deliberately turned the glass at different angles to obtain the required reflections, an intelligence not possessed by any animal other than man.

—The finest garden hedges in England are at Hall Barn, in Buckinghamshire. They are over thirty feet high, are immensely thick and are clipped so as to present the smooth, velvety appearance peculiar to the finest yew and box hedges.

Popular Science.

—After its life in the arts, M. Ditte tells us, a metal is gradually returned to the earth—in most cases in its original form. Iron and tin are reconverted into oxides; copper, into oxides and sulphides; silver, into sulphides, and lead, into sulphides and carbonates. Gold and platinum, usually found pure, disappear through friction and mechanical action. In the soil the more or less altered metals are further changed by saline substances and water, and are slowly washed into cavities, to form metalliferous deposits for the use of future centuries.

—A white rust is an unexplained "disease" of English and German galvanized iron that has developed within a year or two.

—The explosion motor holds the palm for lightness. The best electric motor with its storage battery is stated to weigh nearly one hundred pounds to the horse power, and the Serpollet steam engine, flashing water into steam from a coil boiler, about fourteen pounds. But the Bourdiaux gasoline engine gives a horse power with a weight of only eight pounds.

—The new self-luminous mixture of a French chemist, claimed to require only very short exposure to light and to be unusually brilliant and lasting, consists of twenty parts of dehydrated sodium carbonate, five of sodium chloride, one of magnesium sulphate, five hundred of strontium carbonate and 150 of sulphur. The well-mixed materials are kept at a white heat for three hours in a muffle from which the air is carefully excluded.

—The largest pendulum ever made is that with which Messrs. Berbet and Flammarion have been demonstrating the earth's rotation in Paris. A lead ball of fifty-six pounds is attached to a fine piano wire about 210 feet long. The oscillation lasts sixteen seconds.

—Among its many curious products South Africa includes the "sneezewood" tree, which takes its name from the fact that one cannot cut it with a saw without sneezing, as the fine dust has exactly the effect of snuff. Even in planing the wood it will sometimes cause sneezing. No insect, worm or barnacle will touch it; it is very bitter to the taste, and when placed in water it will sink. The color is light brown, and the grain very close and hard. For dock work, piers or jetties it is a useful timber, lasting a long while under water.

Home Dressmaking.

Hints by May Manton.

4272 Girl's Night Gown, 2 to 10 years.

4274 Girl's Russian 4 to 12 yrs.

Girl's Russian Dress. 4274.

Russian dresses are always becoming to childish figures in addition to which they are in the height of style. This very smart example suits many materials, but in the original, is of dark blue cheviot with pipings of silk stitched with corticelli silk and handsome enamelled buttons.

The dress is cut with full length fronts and a back that is separate from the skirt, both being gathered and joined at the waist line. The sleeves are in bishop style with straight narrow cuffs, and the neck is finished with a standing collar that closes at the shoulder. The right front laps well over the left, in double-breasted style, where it is held by buttons and buttonholes, and at the waist is worn a belt that is closed invisibly at the left side.

The quantity of material required for the medium size is 4¼ yards 21 inches wide, 4¼ yards 27 inches wide or 2½ yards 44 inches wide or 2¼ yards 52 inches wide.

The pattern, 4274, is cut in sizes for girls of 4, 6, 8, 10 and 12 years of age.

Girl's Night Gown. 4272.

Simple little night gowns made with comfortably fitting yokes are always in demand for little girls. This very pretty model is shown in cambric, with feather stitching in heavy cotton thread, but can be made of flannel, flannelette, long cloth, muslin or nainsook, and the narrow frills can be replaced by either lace or needlework.

The gown is made with a yoke, fitted by shoulder seams, and a full skirt portion that is shaped by means of under-arm seams. The skirt portion is gathered and joined to the yoke, the closing at the centre-front being made through an applied box plait. The sleeves are full and are gathered into straight bands or cuffs, and the neck is finished with a narrow neckband.

The quantity of material required for the medium size (8 years) is 4¼ yards 27 inches wide or 3 yards 36 inches wide.

The pattern, 4272, is cut in sizes for girls of 2, 4, 6, 8 and 10 years of age.

4271 Circular Skirt, 22 to 30 waist

4270 Man's Waistcoat, 34 to 44 breast.

Woman's Circular Skirt. 4271.

To be Made With or Without the Circular Flounce. Perforated for Dip in Front.

Circular skirts made with circular flounces that provide flare at the lower portion are much in demand, and suit some figures and materials better than any other sort. The smart model illustrated is shown in biscuit-colored canvas, and is trimmed with folds of silk stitched on with corticelli silk, but all skirting and suit materials are appropriate, and the trimming can be varied in any way that may be preferred.

The full length skirt is cut in one piece. The circular flounce, which also is in one piece, can be arranged over the skirt or seamed to the edge, and the skirt cut off at indicated lines, or the flounce can be omitted and the skirt made plain. The upper portion fits smoothly, the necessary fullness being taken up by hip darts, and the back is laid in deep inverted plaits.

The quantity of material required for the medium size is 7¾ yards 27 inches wide, 5 yards 44 inches wide or 4¼ yards 52 inches wide.

The pattern, 4271, is cut in sizes for a 22, 24, 26, 28 and 30-inch waist measure.

Men's Waistcoat. 4270.

Waistcoats of washable fabrics made without collars or lapels are much in vogue, and are essentially smart. This very excellent model has the merit of being exceedingly simple and absolutely correct at the same time. As shown, it is made of striped cotton vesting, but all materials used for waistcoats are suitable, whether of cotton, wool or silk.

The garment is cut with fronts and backs, and is fitted by means of a centre back, shoulder and under-arm seams. All the edges are stitched with corticelli silk, and on each front is placed a patch pocket. At the under-arm seams are placed shaped straps of lining, that are finished at one end in a point, at the other with a buckle to regulate the size of the waist. The left front laps over the right, and the closing is effected in centre by means of buttons and buttonholes.

The quantity of material required for the medium size is 1 yard 27 inches wide or ¾ yards 54 inches wide, with ¾ yards 36 inches wide for back.

The pattern, 4270, is cut in sizes for a 34, 36, 38, 40, 42 and 44 inch breast measure.

4273 Blouse or Shirt Waist, 32 to 42 bust.

4275 Blouse or Shirt Waist, 32 to 42 bust.

Woman's Blouse or Shirt Waist. 4275.

Simple waists always possess an inherent charm and are essentially smart. This attractive model is shown in peau de cygne, in reseda, with stitchings of corticelli silk in a darker shade, is trimmed with drop buttons of openwork silver and makes part of an entire gown; but the design suits all gown and waist materials, the odd bodice as well as the costume.

The foundation lining is smoothly and snugly fitted and closes at the centre front. The waist proper consists of a plain back and deeply tucked fronts, and closes invisibly beneath the tuck to the left of the centre, in conformity with the accepted style of the season. The back is drawn down at the waist line, but the fronts blouse slightly over the belt. Over the shoulder seams are applied pointed straps that fall over the sleeves and give the long-shouldered effect. The sleeves are full and are finished with pointed cuffs. At the neck is a stock that is cut to a point at the centre front.

The quantity of material required for the medium size is 4 yards 21 inches wide, 3¾ yards 27 inches wide or 2¼ yards 44 inches wide.

The pattern, 4275, is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure.

Woman's Blouse or Shirt Waist. 4273.

To be Made With or Without the Fitted Lining.

Invisible or princess closings with yoke effects are seen upon many of the latest and smartest waists. This stylish model includes both features, the tucking being graduated to give a yoke effect at the front, with one of the newest collars and the fashionable full sleeves. The original is of plaid louisine silk, cut bias and trimmed with pipings of black velvet and carved metal buttons, but all waisting materials are appropriate, silk, wool and cotton.

The waist is made over a fitted lining that closes at the centre front separately from the outside, but which can be omitted whenever washable fabrics are used or less warmth is desired. The waist consists of a smooth-fitting back and of fronts that are stitched in tiny tucks at the neck and shoulders, with a wide tuck on each front, that meet in the centre and cover the hems, through which the invisible closing is made. The back is gathered and drawn down snugly at the waist line, but the fronts blouse slightly over the belt. The right front edge is lapped over the left beneath the wide tucks, so bringing the edges together. The sleeves are full and are finished with cuffs cut to match the pretty collar. The stock is the regulation one, with the addition of the turn-over portion.

The quantity of material required for the medium size is 4¼ yards 21 inches wide, 3¾ yards 27 inches wide, 3¼ yards 32 inches wide or 2½ yards 44 inches wide.

The pattern, 4273, is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure.

HOME DRESSMAKING.

SPECIAL PATTERNS—For a catalogue of any pattern illustrated on this page, send 10 cents (coin or postage stamp), state number, shown on cut, and size wanted, and write your name and address distinctly. Mail orders filled promptly. Address MASSACHUSETTS PLOUGHMAN, Boston, Mass.

The Horse.

Grass Culture.

Recently Mr. George M. Clark of Higganum, Ct., delivered a lecture on "Grass Culture" at North Leominster, Mass., at a meeting of the Pomona Grange at this place. We give herewith the substance of his lecture.

Hay is annually worth millions more than corn, cotton, wheat, oats and rye combined. Fifty years ago it was worth $2,000,000, now nearly ten times as much. Science or something else must soon step in to keep up the supply. I have had a circular printed to aid the work, and in two years have personally answered more than twenty thousand letters concerning grass culture, and have sent with each letter one or more of these little circulars of mine. I am always glad to send to any one interested a free copy of my circular on increasing the grass crop, the applicant enclosing me a two-cent stamp for postage.

You cannot rush through my suggestions in this little pamphlet, then do as you please, and expect good results. It has taken fifteen years of experimental work to make the book, and the most of you will have to read and study it before you will get the facts planted in your brains. The old saying is, "Anything that is worth doing at all is worth doing well," and if that refers to grass culture, it is absolutely true.

There is a large amount of talk about worn-out lands, and half the letters which I receive speak of this subject. Now, I wish emphatically to say there is no such thing as worn-out lands; they are simply dormant.

Intense cultivation is the principal thing in renewing and giving new life to the soil. It must be worked, entirely worked, twenty times at least more than now. The old sod should be made into plant food right away. The surface of the land should be kept true, and worked to an even depth of at least six inches. The land should be worked as many as thirty times in July and August, and seeded Sept. 1, in this latitude.

My experience indicates that timothy and redtop must be sown, completed and finished at the same date. In other words, a field sown in part Monday and again in part Saturday of the same week, will never produce any grass from the seed sown Saturday, for the reason that seed sown Monday will take possession of the field. I use fourteen quarts of timothy and fourteen quarts of recleaned redtop to each acre, and put it on as described in my circular.

It is important that the fertilizer should be well mixed. I use bone, muriate of potash and nitrate of soda. These fertilizers, as a whole, cost not more than $3 per ton of hay produced.

Perhaps Page 12 in my little pamphlet is the most important page in the book in showing results. My entire crop, from sixteen acres, in one year, from the two cuttings, was 208,479 pounds, which, when figured at $18 per ton, gave an average profit of $51.61 per acre, while at $8.50 per ton the net cash profits were $20 per acre. All the details suggested by me must be substantially carried out, otherwise will not succeed.

How often should the land be reseeded? I should say once in five or six years. It takes ten months to produce a crop, and forty days from the time it starts in the spring. With this cultivation a drought will not do much harm. The winter storms always give water in the spring, and intense cultivation, with perfect connection with the subsoil, give an early start, and from three to five inches more water will make the first crop. The old field cannot do it. This new method will always make a large first crop.

Timothy and redtop should be cut as soon as half the heads show full blossom. Two to three days of good sunshine will cure heavy grass, but with poor weather time only tells. I always heap my hay when hot, say from 2 to 4 o'clock P. M. I always cut my second crop just before frost. I never pasture my grass fields. I do not think it pays to fertilize old fields. Keep your grass fields clean and fertilize every crop. While the average farmer may not be able to carry out my full scheme, yet he can more intensely cultivate, seed and fertilize, and give the grass the first chance, thus doubling his present product. These points are all outlined in Mr. Clark's circular, which is free to any one who sends a two-cent stamp to George M. Clark, Higganum, Ct., to pay the postage.

Intense cultivation is the watchword. Without it you cannot succeed. That fact is, perhaps, more fully shown in Mr. Clark's plum orchard of four years. Double cut with a double action cutaway harrow six times per month, eighteen times in April, May, June and July each year, without any fertilizer whatever, showing an average growth of more than four feet each year. This produced the third year five hundred baskets and the fourth year one thousand large baskets of very large plums from 1425 trees.

Think of it, the growth has been more than sixteen feet in the four years. The total average growth this year to each tree is over three hundred feet. No fish in this. Intense cultivation has done it. This is no makeshift talk, for the trees are there and any one can go and see them. I would like to have everybody see them. The same effect would be produced on peaches or any other fruit.

However, the subject under discussion here is grass culture. My first crop this year from 14⅝ acres was sixty-four tons, 874 pounds. The second crop, from 11⅛ acres, was 35,920 pounds, making a total of seventy-five tons of dry hay, and from 11¼ acres over 6¾ tons to the acre. The field of seven-eighths of an acre, not underdrained, seeded thirteen years, cut in twenty-six crops, a total of 104¾ tons, or over eight tons per year. This is a flat section, composed of clay, gravel and hard pan, with no vegetable matter on it. I have used no fertilizer on it for fifteen years, except bone, potash and nitrate of soda.

The five-eighths of an acre adjoining is nearly flat. Has a little vegetable matter on top, not underdrained, reseeded every sixth year. This cut the current year, in two crops, 13,375 pounds, or at the rate of 21,400 pounds, or over ten tons to the acre. The total cost of cutting and making the two crops this year was less than $2 per ton, fertilizer $3 per ton, total cost of hay in the barn $5. This year is no exception.

As to general forage crops, ensilage, corn, cow peas, crimson clover and other clovers, orchard grass and all kinds of grain, I have made thousands of machines with which to do the work, but there are others who know more than I do. One thing I know for certain, that the best results cannot be obtained without intensive cultivation. I experimented with a neighbor's corn field for a number of years, changing each year, and the result was nearly double the crop, and even more in dry years. Sunshine and air work wonders. I would like to have any one come and see my work, and shall also be pleased to answer any questions which they may ask.

Life Insurance Savings.

BY JAMES W. ALEXANDER.

More potent even than the great commercial and industrial enterprises so intelligently and energetically carried out by Americans, the savings of the people give to America its pre-eminent position in the world of finance. The general education of the masses, coupled with the almost universal moral and religious training, has developed a common sentiment of prudence, thrift and rational economy, resulting in a larger amount of cash savings belonging to the people at large in America than in all the rest of the world together. These savings are aggregated into two great divisions—the funds deposited in savings banks and those invested in life insurance. In some countries, notably in France, the people conserve their savings, to a large degree, in actual coin, kept in hiding, or in their private strong boxes, or in small investments in the public funds. In the United States probably ninety per cent. of the total savings of the people are either invested in securing life insurance or deposited in savings banks. The aggregated billions of money thus saved are represented by bonds—Government, State, municipal, railway and other great corporations—or in loans based on realty, enabling the erection of magnificent business structures, impossible ordinarily through individual investment, of which no other country has such remarkable examples as the United States.

The intelligent, broad-minded methods pursued by the life insurance associations of America have demonstrated that, aside from the insurance against sudden or premature death, more substantial results are obtained for savings by investment in life insurance than through interest allowed on savings bank deposits. The total fund invested in life insurance in the United States exceeds the aggregate of all the rest of the world—three companies incorporated in the State of New York have assets beyond a billion of dollars and equaling the entire national debt of the United States. The life insurance companies of America do more business in other countries than the local or native companies.

Aside from the fact that this branch of American enterprise has been vigorously and intelligently pushed and developed the world over, there is another and stronger reason for the enormous proportions to which the business has grown. It is the high personal character of the men, who, as directors and officials, have conducted their affairs from the beginning of life insurance companies here, which practically dates back only half a century. It was seen from the beginning that, to secure the confidence of the people in any association, so that its business might be successful, only men of the highest standing for honor and integrity could be put forward as responsible for its management. As this class of men was chosen in the origin of each company, it was but natural that, as vacancies occurred, they should be filled by the highest type of man available. Unlike most other corporations, in which the owners of the stock are generally made directors according to their large holdings and without reference to their personal character, in life-insurance companies and associations the directors and managers have no stock holdings, or, as in the case of a few stock companies, but insignificant interests, and are chosen chiefly for the degree of confidence their personalities secure for the organization. It may be unreservedly said that nowhere else in the world, and in no other kind of business or enterprise, can boards of managers or directors be found of such exceptionally high individual character as upon the boards of the numerous great life corporations of America.

As an incident following this tone in the directing of life insurance affairs, the effort of each established and prosperous association has been to bring itself to the standard of what James W. Alexander, in addressing the Convention of State Insurance Superintendents recently, called "the ideal company." So great is the experience of Mr. Alexander, and so thoroughly and from so high a plane has he studied the subject, that it is worth while quoting some passages from this address. Mr. Alexander said:

"Perhaps the most logical way of arriving at what are the important elements in the conduct of this most useful and most sacred business is to portray the ideal company; to see how nearly we approach it in practice; to note the difficulties and obstacles which prevent the attainment of perfection; and to ask ourselves how these difficulties are to be overcome, these obstacles to be surmounted."

And, before attempting this description, let me say that in my judgment there is no business in the world, commercial, financial or beneficent, which at all approaches that of life assurance in skillful conduct and the maintenance in practice of sound principles. And this may be ascribed in some measure to the publicity given to all details of management. If the same publicity were given to the details of management of other forms of corporation, there would be far less opportunity to find fault. When it is remembered that the administration of one of our large life assurance companies is dissected, and the detailed results publicly proclaimed by some fifty State Insurance Departments, each watching to expose any irregularity, and by the official supervisors of every foreign government within whose domains the company is permitted to transact business, including in some instances Great Britain, Canada, Australia, France, Germany, Russia, Spain, Italy, the South American States, Mexico and others; each having its own searching methods, each submitting the results of its examination to the scrutiny of an interested and critical public, among whom are experienced mathematicians and statisticians, as well as industrious seekers for some weak spot for attack; when all this is borne in mind, it is not difficult to accept the truth of what I say—that an enterprise which can run the gauntlet of an annual inquisition, and come out unscathed, is entitled to confidence and respect as no other enterprise can be.

And discussing the "ideal life insurance company":

It is, first of all, one whose officers and directors are high-minded, honorable, experienced and skillful men, who have no aims in the business other than to subserve the interests of the policyholders.

Nothing, in my opinion, is so important as character in the management. As President Roosevelt succinctly expressed it in a recent address: "It is character that counts." I do not mean mere honesty in the handling of money. That is a very inadequate criterion of character. The officer who would, for the sake of outstripping a competitor in business, pursue a course which he knows to be prejudicial to the interests of the policyholders, has not the kind of character to which I refer. The officer who would abuse the power he holds for selfish purposes at the expense of the policyholder, has not the kind of character to which I refer. The officer who allows himself to be guided in his measures by the desire to injure his competitor, rather than to benefit his own company, has not the kind of character to which I refer. The officer who would deliberately take dangerous chances in order to make his wares cheaper or more popular, has not the kind of character to which I refer. The officer who would knowingly adopt deceptive measures, or encourage his agents to do so, has not the kind of character to which I refer. These illustrations might be multiplied. Those given are sufficient to make clear what I mean.

This subject of character—I might call it the character of a gentleman—I consider one of the most indispensable attributes of one directing the affairs of an institution like ours—perhaps the most sacred of all secular undertakings.

The ideal company should conduct the business for the exclusive benefit of the policyholders; in other words, on the mutual plan. It matters not whether the company is organized with or without stock capital. This is a mere question of control or statutory requirements.

The fact is that I know of no form of corporate government so well secured against improper use of power as that of the life insurance companies. The abuses common among the industrial, transportation and other commercial combinations are not only practically impossible among life assurance companies, but the opportunity for personal aggrandizement, which lies at the root of those evils, does not exist among us. . . .

The ideal company should have as low an expense rate as is compatible with a broad and liberal conduct of the business. And this opens up a wide question. Life assurance is essentially a beneficent institution. Transacted on the mutual plan, it is conducted for the benefit of none but the policyholders. Within reasonable limits a largely extended business is to be desired. A large business, with a large office force and many agencies, entails a certain amount of expenditure. But this expenditure, prudently restricted, is amply offset by the advantages obtained for the policyholders. In the ideal company, however, every effort would have to be made to confine the expenses to a minimum rate. How to do this is taxing the skill, experience and wisdom of managers to the utmost. Obviously, one of the most important ingredients of a life assurance company's expenses is the compensation paid to agents for obtaining the business. Every one knows that if there were no agents there would be little business. If it is desirable to extend the benefits of the institution to as many people in the world as possible (and who can question it?) agents must be employed to do it. How to be fair to these agents and at the same time just to the policyholders is indeed a grave problem for the ideal life assurance company.

In my opinion, the ideal company should have a large and widely extended business. This does not mean that the many small and well-managed companies are not entitled to respect and confidence. On the contrary, I believe that it is the duty of the large companies to be friendly and helpful to the small companies that are carefully and soundly managed. The point is whether these same companies would not more thoroughly fulfil the object of their existence if they did a large and widely extended business. What is the motive of doing any business whatever on the purely mutual, unselfish, beneficent plan? I can see no legitimate motive possible but to benefit the people. If, then, it is well to do this thing to benefit the people, it is well to do as much of it as is possible within the limits of doing it well and with the best results for the beneficiaries. The larger the business transacted under proper conditions, the greater opportunity there is to secure the best talent. Mediocre business commands mediocre talent; and capacity is of great moment in this business. The more widely the business is extended the greater opportunity is secured for the offset of advantages against disadvantages. When a business is done on a large scale in many parts of the world, questions which would otherwise be grave sink into insignificance. If there is an excessive mortality in New York, there may be at the same time a favorable mortality in Paris or London. If there is epidemic disease in New Orleans, it is the law of average that a corresponding condition of salubrity will exist in some other region. And it is by combining the experience in a vast business in widely separated regions, under differing conditions, that the best average results are to be obtained, and consequently the greatest degree of safety. Wider reputation also is secured by the establishment of a company's credit all over the world, and one influence reacts on another, so that it becomes easier to obtain business on normal terms. A large business makes it possible to multiply facilities at the lowest cost pro rata, and works for economy. It necessarily employs a greater number of men, and thus furnishes a school from which the most efficient talent may ultimately be selected for the higher interests of the institution. A business on a large scale makes the company a centre for the converging of the most desirable investments, as well as a distributing centre useful in the most emphatic way for borrowers who can furnish recognized security. Indeed, there is no instrumentality for the wise distribution of wealth among the masses, in various ways, which approaches the life assurance business with its great accumulations, which are required to be held, and which until needed are constantly being loaned to the public or invested in enterprises which operate for the public benefit. If it were feasible to compel every man to assure his life (which, of course, it is not), it would be almost a complete method for adapting the wealth of the world to the greatest needs of the greatest number.—Town Topics.

—There are no less than 3262 different species of fish inhabiting the waters of America north of the isthmus of Panama.